



# GPS Director Plus GD-102 User Manual

Version 1.1



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# Chapter 1 : Functions and Specifications

## 1-1 Function and Features

- Can set 5 Destination Points
- Display directions with Digital Arrow Display (Can display 16 directions)
- Magnetic North Direction Indication; present coordinates display
- Manual Setting of Destination Coordinates
- Maximum Destination Distance Showing (0~999.99)
- GPS fix status indication
- 3 Kinds of Distance Unit: km/mi/nm for setting
- Time Zone Setting/ Date and time display
- End User changeable Battery Design: AAA x 2, Rechargeable Battery /General Battery / Alkaline Battery
- Alkaline battery life can last for 15 hours. The battery life can be lengthened under power-saving mode.
- Simple function of buttons
- Battery Power Level Indication
- Backlight Time Setting
- Power-saving mode setting
- Build in Data logger to record the path you walked
- Support Simple Route Navigation; Edit the path via PC Utility

## 1-2 Specifications

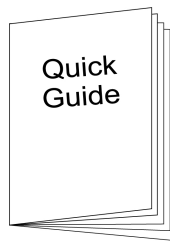
<b>Electricity</b>	
GPS chipset	High sensitivity single chip solution
Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz chip rate
Channels	48 channel all-in-view tracking
Sensitivity	Tracking:-161dBm
<b>Display</b>	
Pixel H*W	96x65 dot Matrix
Backlight Type	White
<b>Power</b>	
Battery Type	AAA X 2
Operation Time	15 hours
<b>Buttons</b>	
Power/Backlight Button	<b>Short-click:</b> Turn on backlight. <b>Long-click:</b> <ol style="list-style-type: none"> <li>1. Power off device under main screen.</li> <li>2. Return to last page under each setting screen. °</li> </ol>
Selection/ Setting Button	<b>Short-click:</b> To select. <b>Long-click:</b> To set. Make GD-102 enter main screen by long clicking Power/Backlight Button and Selection/ Setting Button at the same time.
<b>Appearance</b>	
Dimension	69 X 59 X 23 (mm)
Weight	45g, (Not including batteries)
Color	White
Waterproof	IPX4
<b>COORDINATES SYSTEM</b>	
Coordinates System	Default : WGS-84
<b>DYNAMIC CONDITION</b>	
Accelerate Speed	Less than 4G
Height Limit	18,000 Meter
Speed Limit	515 m/sec
Vibration Limit	20 m/sec**3
<b>GPS FIX TIME</b>	
Hot Start	Average 1 second
Warm Start	Average 38 second
Cold Start	Average 42 second
Get GPS fix Again	Average <1 second

<b>Antenna</b>	
GPS antenna	Patch Antenna
<b>ACCURACY</b>	
Horizontal Position	10 meters, 2D RMS 2 meters CEP
Speed Accuracy	0.1 m/sec
Time Accuracy	1 micro-second synchronized to GPS time
<b>Temperature</b>	
Operation Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 70°C
Humidity Range	Operational up to 95% non-condensing
<b>Certification</b>	
FCC	USA (Covers requirements for CANADA ICES-003)
CE	Europe

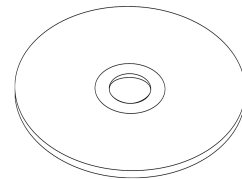
## 1-3 Accessories



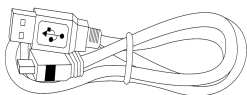
GD-102 Main Device



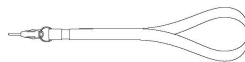
Quick Start Guide



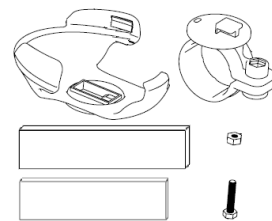
CD



USB Cable



Hang String

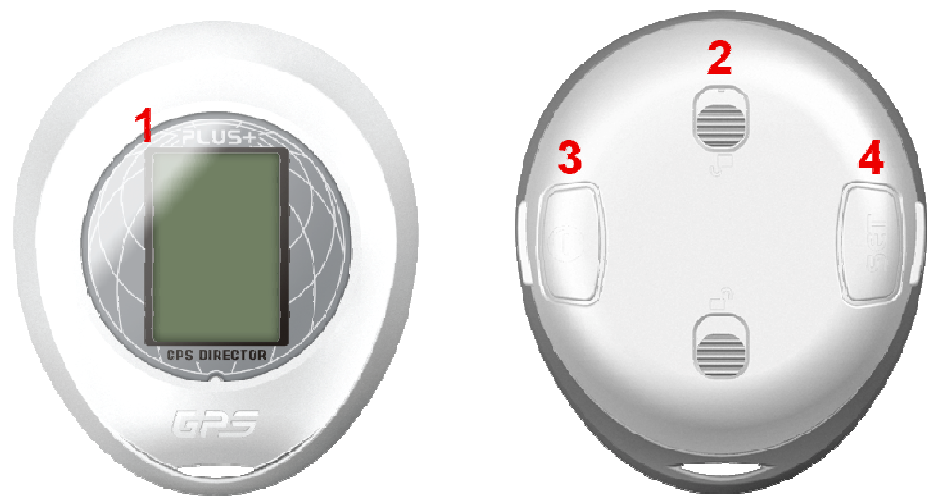


Bike Mount Package  
(Mount/Fixed  
base/Spacers/Screws)

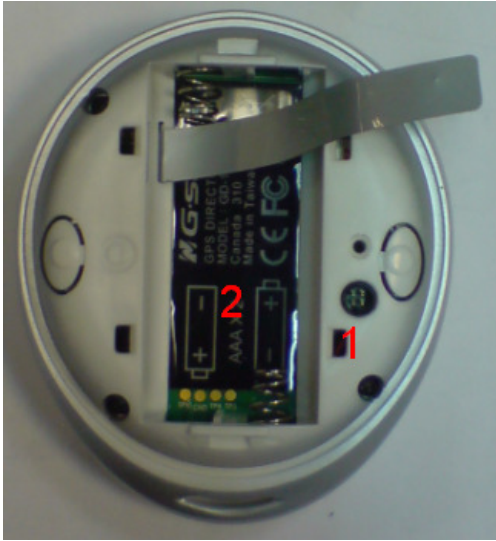
### NOTE :

If any accessory is not included or damaged, please contact the local dealer.

1-4 Appearance



Front view and Back view		
1	Display	Shows the GPS fix status, power level, destination direction and distance
2	Battery Cover	Unlock the both of lock and lift the cover from bottom side
3	Power/Backlight Button	<b>Short-click (1sec):</b> Turn on backlight. <b>Long-click (2sec):</b> 1. Power off device under main screen. 2. Return to last page under each setting screen.
4	Selection/ Setting Button	<b>Short-click (1sec):</b> To select. <b>Long-click (2sec):</b> To set. Make GD-102 enter main screen by long clicking Power/Backlight Button and Selection/ Setting Button at the same time.



1	Connector	Connected via PC Connecting cable with PC/NB
2	Battery place	Install AAA Battery * 2 in correct direction

# Chapter 2 : Start to Use

## 2-1 Install AAA Battery into the device

Unlock the battery lock



Take the cover off



Put the battery in the correct direction



Push in opposite side to Lock



## 2-2 Magnetic North Adjustment



1. When using GD-102 for the first time, GD-102 will automatically perform the magnetic-north adjustment as seen in the left screenshot.
2. For the method of adjustment, please refer to Chapter 3-2.
3. If GD-102 shows the incorrect or inaccurate direction, please perform the magnetic adjustment by operating the function button.

# Chapter 3 : Using GD-102





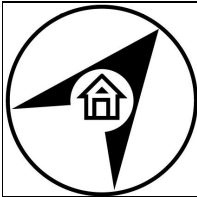





## 3-1 Main Function Screen

GD-102 has three main function screen , just press shortly the “PW/Backlight” key to change **Direction Navigating, Moving Info, Accumulator Info** sequentially .

The default screen is **Direction Navigating** .

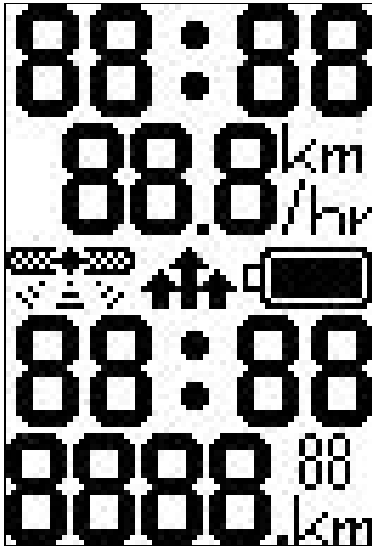













### Direction Navigating

It shows the direction and distance of target place.

	Indication	Description
		The GPS fix indication  will keep ON when device gets a GPS fix. GPS fix indicator will flash when device does not have GPS fix.
		The distance between GD-102 and destination will only be shown/ displayed when device has GPS fix.
		The direction of the setting destination of GD-102. The arrow will direct to the destination after GD-102 has GPS fix and has performed the magnetic-north adjustment.
		What is shown on upper right corner is the battery power level  75%~100%  50%~75%  25%~50%  Battery Low. Please change the batteries

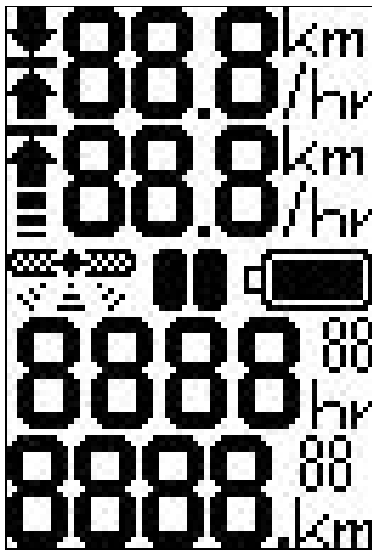









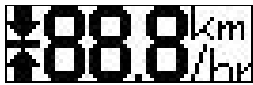
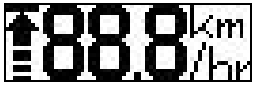


## Moving Information Screen

It shows current time, moving speed, moving period and moving distance.

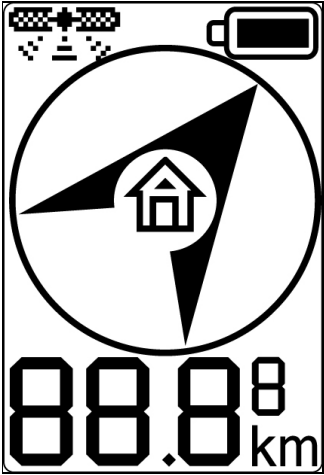





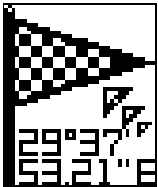
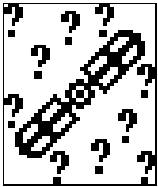
	Indication	Description
		The GPS fix indication  will keep ON when device gets a GPS fix. GPS fix indicator will flash when device does not have GPS fix.
		What is shown on upper right corner is the battery power level  75%~100%  50%~75%  25%~50%  Battery Low. Please change the batteries
	Press select/enter key to start calculating and record functions, the symbol of this function is  ; it will calculate and record speed, period, distance when moving. The default is “off”  .	
	Long press select/enter key will refresh this screen and accumulate time/distance into total accumulating time/distance. Beside it, the avg. speed and max. speed will turn to zero.	
		First Top column is current time(24 hrs)
		Second column shows current moving speed. Max. value is 999km/hr
		Third column shows the current moving period. The max. value is 99 hrs and 59 mins.
		Last column shows the current accumulated distance. The max. value is 9999.99km .

## Accumulator Information Screen

Under this screen, it shows total average moving speed, total moving max speed, total moving period and total moving distance ◦

	Indication	Description
		The GPS fix indication  will keep ON when device gets a GPS fix. GPS fix indicator will flash when device does not have GPS fix.
		What is shown on upper right corner is the battery power level  75%~100%  50%~75%  25%~50%  Battery Low. Please change the batteries
	Press select/enter key to start calculating and record functions, the symbol of this function is  ; it will calculate and record speed, period, distance when moving. The default is “off”  .	
	Long press select/enter key will refresh this screen and accumulate time/distance into total accumulating time/distance. Beside it, the avg. speed and max. speed will turn to zero. (The same as <b>Moving Information Screen Function</b> ) Note: If user wants to delete the total moving period and total moving distance, it can operated via PC Utility.	
		First Top column is average speed
		Second column shows the highest speed. Max. value is 999
		Third column show the current moving period. The max. value is 99 hrs and 59 mins.
		Last column show the current accumulated distance. The max. value is 9999.99km ◦

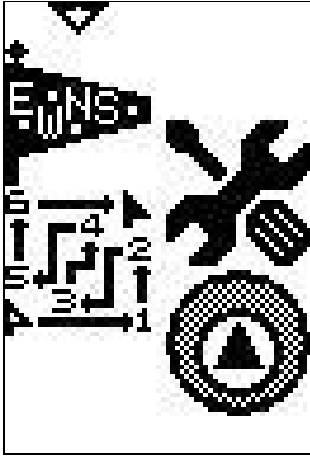
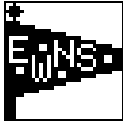





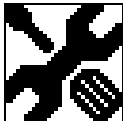




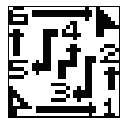
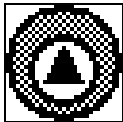




3-1-1 Automatic Setting the Destination

	<p>Description</p> <ol style="list-style-type: none"><li>Under direction indication screen, click Selection/ Setting button to select and set the following 5 destination's coordinates.</li></ol> <div></div> <ol style="list-style-type: none"><li>After GD-102 has GPS fix, long click Selection/ Setting button will save the present coordinates as the selected destination's coordinates.</li></ol>
	<p>While GD-102 is saving coordinates, GD-102 will display as seen in the screen shot to the left and then return to the direction indication screen.</p>
	<p>If you try to save the present coordinates under <u>no GPS fix status</u>, GD-102 will display as seen in the screenshot to the left and then return to the direction indication screen.</p>

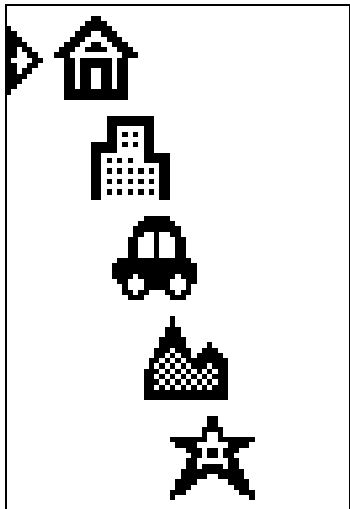










## 3-2 Main Setting Screen

In the direction indication screen, you could make GD-102 enter main screen by long clicking Power/Backlight Button and Selection/ Setting Button at the same time.

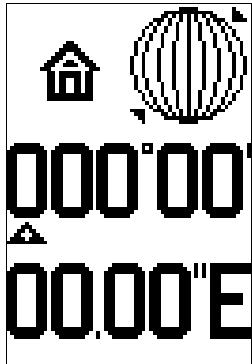
### Screen and Operation Explanation:

	Indication	Function	Operation
		Manual Set Destination's Coordinate	<p><b>Long click</b> Selection/Setting button to enter setting screen °</p> <p>You could set the following items.</p> <div>      </div>
		Function Setting	<p><b>Long click</b> Selection/Setting button to enter setting screen.</p> <p>You could set the following items.</p> <div> <div>  <p>Time Zone</p> </div> <div>  <p>Distance Unit</p> </div> </div> <div> <div>  <p>Backlight Setting</p> </div> <div>  <p>Automatic Sleeping Time</p> </div> </div>
		Display Data Logger	<p><b>Long press select/enter key, for entering this function.</b></p> <p>It shows memory status and it won't execute Data Logger function while 100%. It supports read only.</p>
		Data Setting	<p><b>Long click</b> Selection/Setting button to enter setting screen.</p> <p>You could set the following items.</p> <div> <div>  <p>Date</p> </div> <div>  <p>Sequent Display</p> </div> </div> <div> <div>  <p>GPS Cold Start</p> </div> <div>  <p>Delete Memory</p> </div> </div>

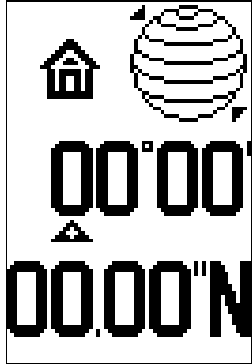
### 3-2-1 Manual Setting Destination's Coordinate

	icon	Explanation
		Set Home's coordinates. The indication  will be ON when the destination's coordinates are set.
		Set Building's coordinates. The indication  will be ON when the destination's coordinates are set.
		Set Car's coordinates. The indication  will be ON when the destination's coordinates are set.
		Set Travel's coordinates. The indication  will be ON when the destination's coordinates are set.
		Set My Favorite's coordinates. The indication  will be ON when the destination's coordinates are set.

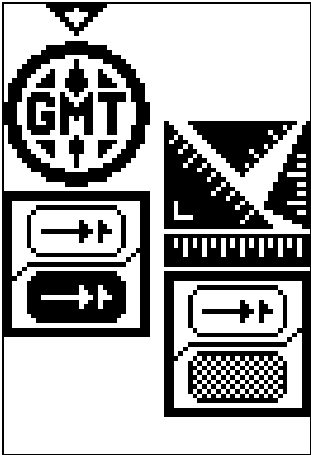




#### Setting Destination's Longitude

	1. The upper left corner is the selected destination. The number is the setting longitude (East or West). An arrow will be indicated to the number on the initial screen.
	2. <b>Short click</b> Selection/Setting button to select the number. <b>Long click</b> Selection/Setting button to enter the selected value and move to the next digit for setting.
	3. The maximum setting is 180 ° 00 '00 . 00 "


#### Setting Destination's Latitude

	1. The upper left corner is the selected destination. The number is the setting longitude (North or South). An arrow will be indicated to the number on the initial screen.
	2. <b>Short click</b> Selection/Setting button to select the number. <b>Long click</b> Selection/Setting button to enter the selected value and move to the next digit for setting.
	3. The maximum setting is 90 ° 00 '00 . 00 "

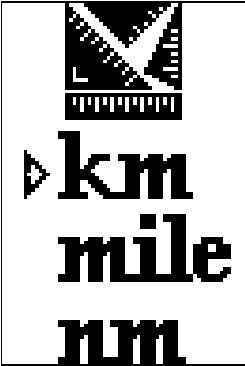
### 3-2-2 Function Setting

	Icon	Explanation
		Set User's Time Zone
		Select the unit of displayed distance, KM, mile, and nm.
		Set backlight timeout
		Set the automatic sleeping time for power-saving


#### Setting Time Zone

	Explanation
	<ol style="list-style-type: none"> <li>1. You could set time zone in this screen. The value on the lower screen represents the GMT time.</li> <li>2. <b>Short click</b> Selection/Setting button to select the time zone.</li> <li>3. <b>Long click</b> Selection/Setting button to save the time zone.</li> <li>4. <b>Long click</b> Power button to return to last screen.</li> </ol>

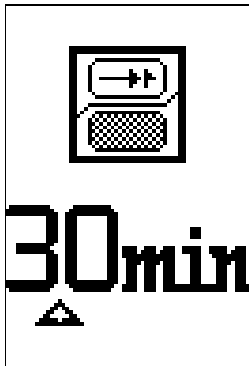
#### Setting Unit of Displayed Distance

	Explanation
	<ol style="list-style-type: none"> <li>1. You could select the unit of displayed distance in this screen. The default setting is km.</li> <li>2. <b>Short click</b> Selection/Setting button to select the unit.</li> <li>3. <b>Long click</b> Selection/Setting button to save the unit.</li> <li>4. <b>Long click</b> Power button to return to last screen.</li> </ol>

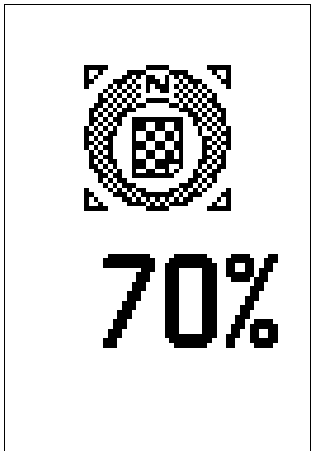
### Setting Backlight Timeout-time

	Explanation
	<ol style="list-style-type: none"> <li>1. Set the backlight timeout-time in this screen. The value in the lower screen is the backlight time-out time. The backlight will be on for the time-out time after you short click the power/backlight button.</li> <li>2. <b>Short click</b> Selection/Setting button to select the backlight timeout.</li> <li>3. <b>Long click</b> Selection/Setting button to save the backlight timeout</li> <li>4. <b>Long click</b> Power button to return to last screen.</li> </ol>

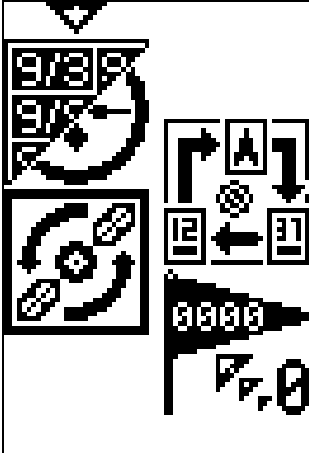




### Set Idle-timeout Time for Going to Sleep Mode

	Explanation
	<ol style="list-style-type: none"> <li>1. Set idle-timeout time for going to sleep mode in this screen. The value in the lower screen represents the idle-timeout time.</li> <li>2. <b>Short click</b> Selection/Setting button to select idle-timeout-time.</li> <li>3. <b>Long click</b> Selection/Setting button to save idle-timeout-time.</li> <li>4. <b>Long click</b> Power button to return to last screen.</li> </ol>


### 3-2-3 DATA LOGGER Memory Information

	Explanation
	<p>Display the used memory status. When 100%, data logger function will be automatically turn off.</p>













### 3-2-4 Setting Data

	Icon	Explanation
		Display the present time of the set time zone.
		Set GD-102 to initialize the sequent display of <b>Direction Navigating, Moving Info, Accumulator Info</b> functions.
		Make GD-102 do cold start °
		Delete the setting coordinate of destination in GD-102

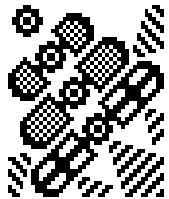
### Showing Date and Time

	Explanation
	<ol style="list-style-type: none"> <li>1. The displayed date and time is from satellite data. It is not user-defined.</li> <li>2. <b>Long click</b> Power button to return to last screen.</li> <li>3. <b>Long click</b> Selection/Setting button to go to main screen.</li> </ol>

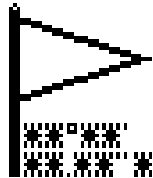
## Sequent Screen Setup

Explanation	
	It starts to display main sequent screen list while idling 10 sec and change the screen per 10 sec. After setup, the Flag  will be shown beside this icon.
	Add <b>Direction Navigating</b> into sequent display list. After setup, the Flag  will be shown beside this icon.
	Add <b>Moving Info</b> into sequent display list. After setup, the Flag  will be shown beside this icon..
	Add <b>Accumulator Info</b> into sequent display list. After setup, the Flag  will be shown beside this icon.
	The “Display main sequent screen list” can be activated when any two of the three    must be added to main sequent screen list..

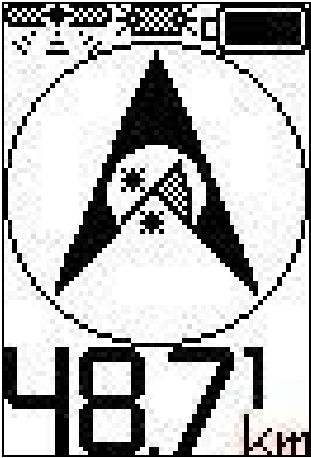


## Cold Start

Explanation	
	<ol style="list-style-type: none"> <li>1. This screen shows GD-102 is performing a GPS Cold Start</li> <li>2. It will return to navigation screen after 1 second.</li> </ol>


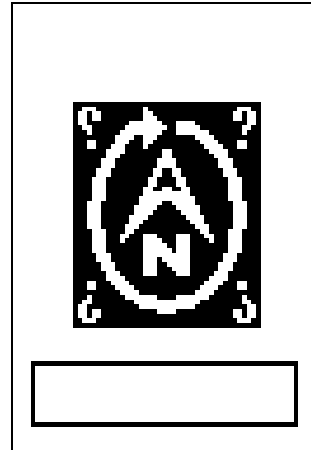
## Deleting Coordinates of Destination Screen

Explanation	
	<ol style="list-style-type: none"> <li>1. This screen shows GD-102 is deleting the coordinates of the destination.</li> <li>2. It will return to navigation screen after 1 second.</li> </ol>

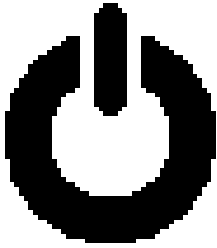
### 3-3 DATA LOGGER and Route Navigating

	Explanation
	<ol style="list-style-type: none"> <li>1. In addition to <b>Direction Navigating</b>, it also has route navigating function. It shows out after  direction function.</li> <li>2. Route navigating function could only be set via PC setting. Each route has 250 points in max. After setting, GD-102 will follow the route to move forward in sequent.</li> <li>3. Long press <b>select/enter</b> key to turn on/off the data logger function .</li> </ol>

### 3-4 Adjusting E-Compass

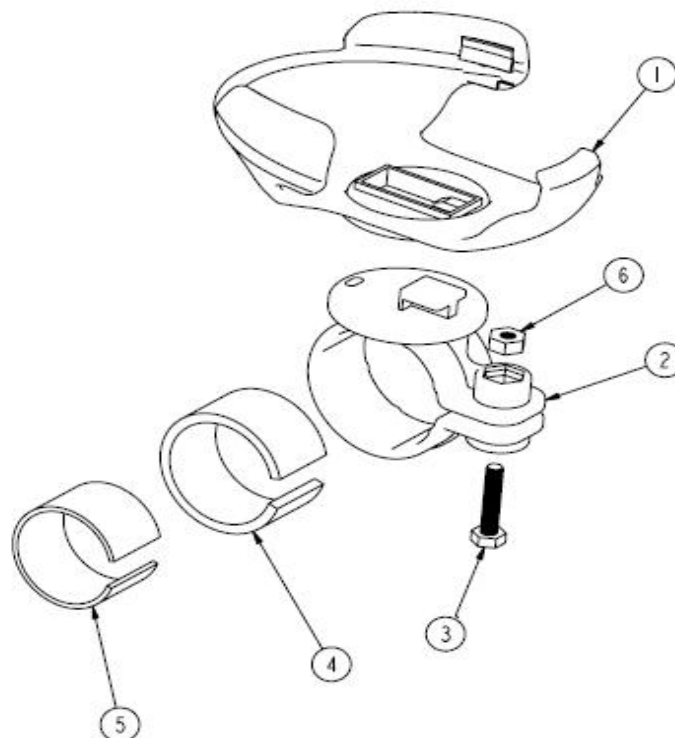
	Explanation
	<ol style="list-style-type: none"> <li>1. GD-102 will display the magnetic northern direction after entering the adjusting electronic compass mode.</li> <li>2. GD-102 will show the coordinates after getting a GPS fix.</li> </ol>
	<p>Adjusting the Electronic Compass</p> <ol style="list-style-type: none"> <li>1. You could adjust electronic compass in this screen.</li> <li>2. If you need GD-102 to do the correction magnetic north directions, please enter the magnetic north indicates, <b>long click</b> Selection/Setting, it will host in accordance with the flat and turn clockwise circle 1-2 complete correction.</li> <li>3. Proposed to carry out this action in the outdoors, to avoid interference with magnetic anomalies.</li> <li>4. GD-102 will automatically return to navigation screen.</li> </ol>

### 3-5 Turning Off GD-102

	Explanation
	<ol style="list-style-type: none"><li>1. In the direction navigation screen, long click power button to turn off GD-102.</li><li>2. GD-102 will be turned off 2 seconds after seeing this screen.</li></ol>

### 3-6 Bike Mount Installation

- Install ② on bike grip and put the suitable spacer ④ or ⑤ into the ring of ②.
- Adjust ② as the fixed angle on the grip and use ③ and ⑥ to lock ② on grip.
- Assemble ① into ②'s mounts as the correct direction and then tight it well.
- Put GD-102 device into ① for the normal operation.



# Chapter 4 : How to Use PC Utility

## 4-1 Software Program Function

Upload Record :	User can upload recorded data and save in PC.
Export Format :	(1) KML for Google Earth (2) GPX for Standard GPS Format (3) GSD (GD-102 PC Utility specific format) (4) CSV
Hardware Setting:	GD-102 Backlight setting, Standby time setting, Target Lat. / Long. Setting
Storage Information :	Location, Time, Date, Altitude, Speed.
Storage Interval :	Set Time interval/ Distance Interval

## 4-2 Install PC Utility to your PC

Put Installation CD into CD-ROM of PC, then it will automatically start the installation program like right screen. User can install hardware driver and PC Utility via this program.

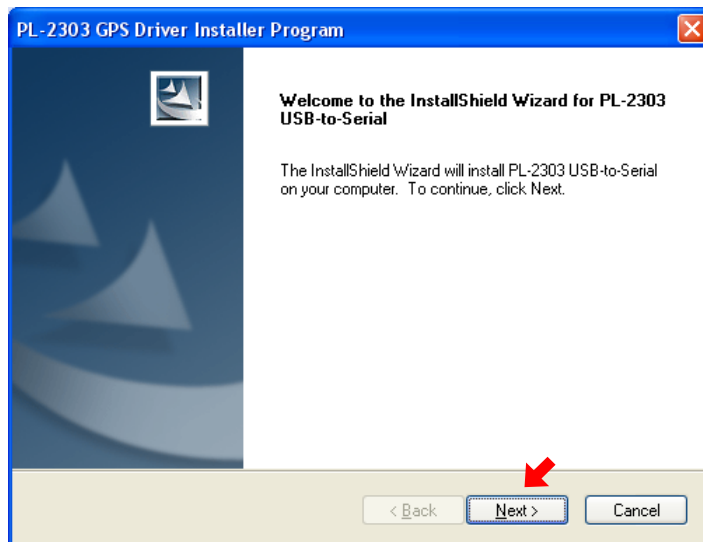


### 4-2-1 Install Driver

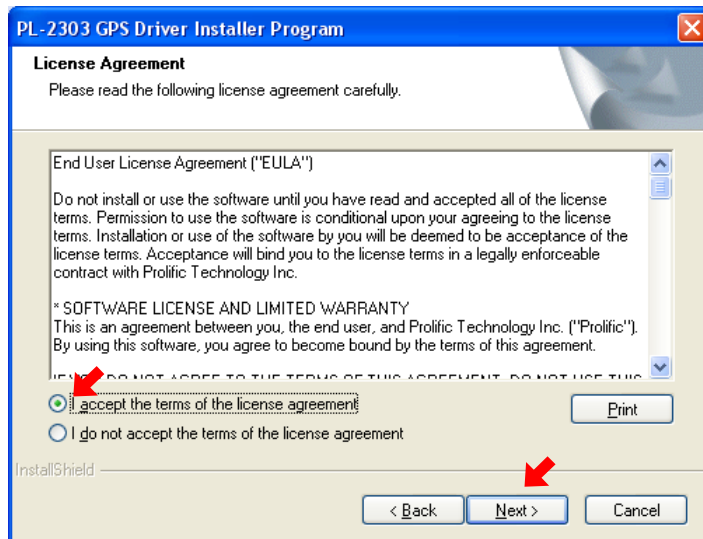
1. Press “Install Driver” first to install USB driver in PC.



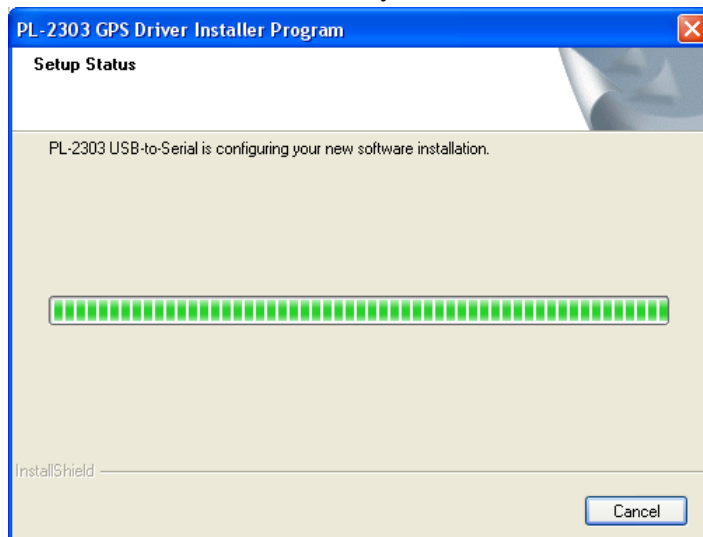
2. Press “Next” to start the driver installation.



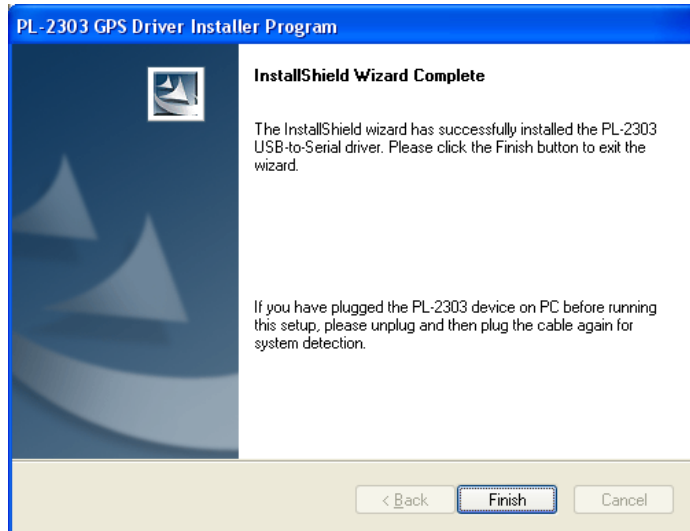
3. Select the “Accept” and then press “Next” after read the EULA.



4. Start to install driver in PC system.



5. After completing the driver installation, press "Finished" to exit the installation.

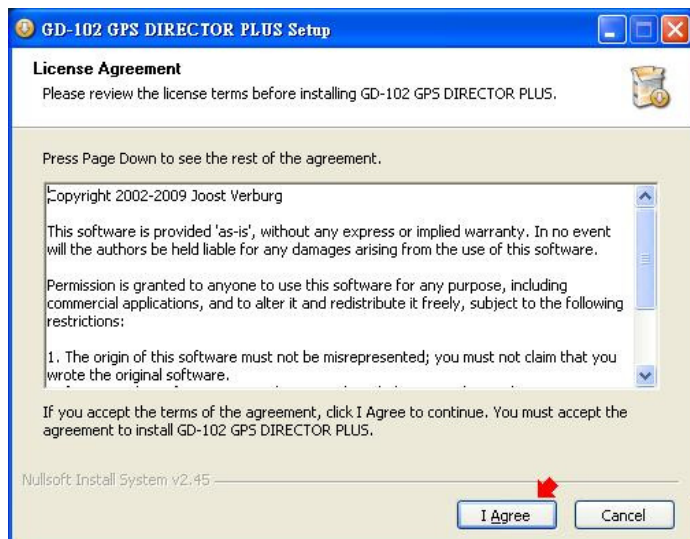


## 4-2-2 PC Utility Installation

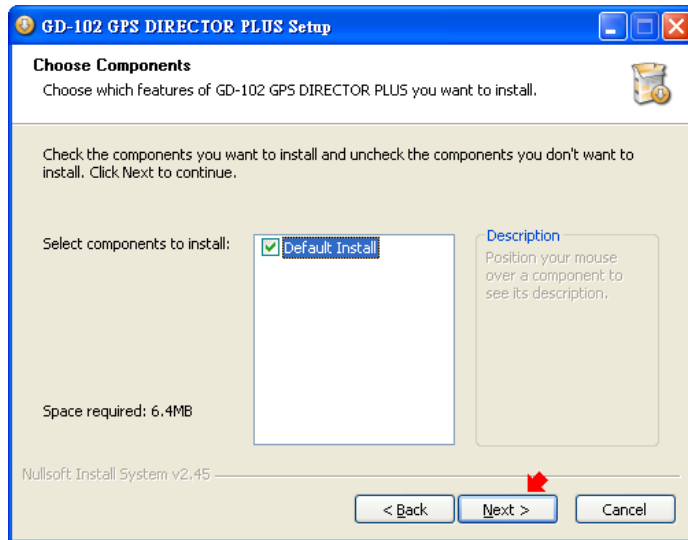
1. Press "PC Utility" first to install USB driver in PC.



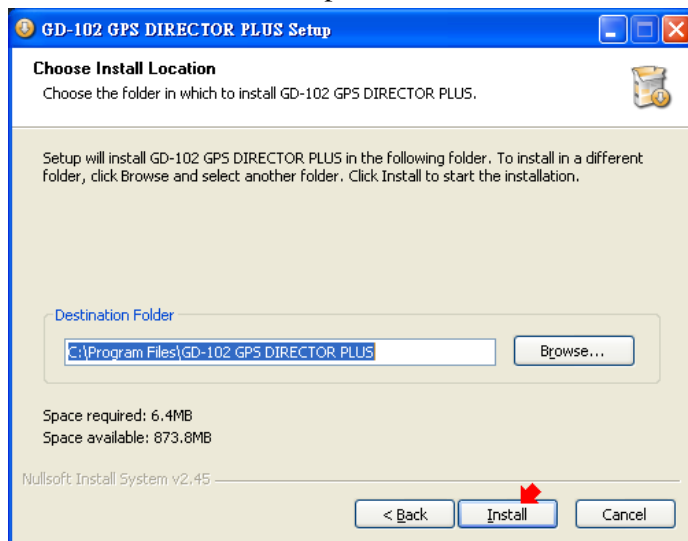
2. Read the license agreement first and then click "I agree".



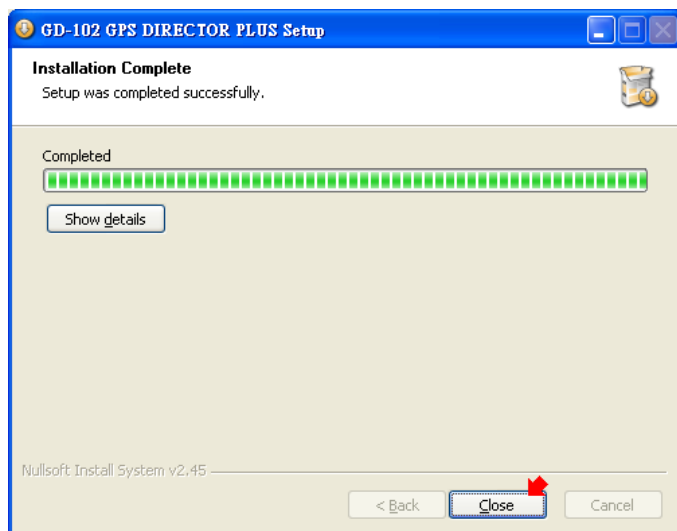
3. Select “Default Install” and Click “Next”.



4. Choose the installation path and click the “Install” to start the installation processing.



5. Complete the installation and then click “Close” to turn off the installation program.



### 4-2-3 User Manual

Click “User Manual” to open the manual folder of CD.



Note: Manuals are made as PDF format. If your PC did not install related software to review the document, please kindly Click “Install PDF Reader” to install the free software for PDF document.

### 4-2-4 Manual Installation of Hardware Driver

1. Put CD into CD-ROM
2. Open files management system and enter the folder “Driver”.
3. Double-click 「setup.exe」 and follow the indication to install GD-102 driver program.

### 4-2-5 Manual Installation of PC Utility

1. Put CD into CD-ROM
2. Open files management system and Enter the folder “PC Utility” of CD
3. Double-click 「setup.exe」 and follow the indication to install GD-102 driver program.

## 4-3 Start to Use PC Utility

### 4-3-1 Connect Device with Cable and PC

1. Open GD-102 battery cover and use the cable to connect the device and PC.

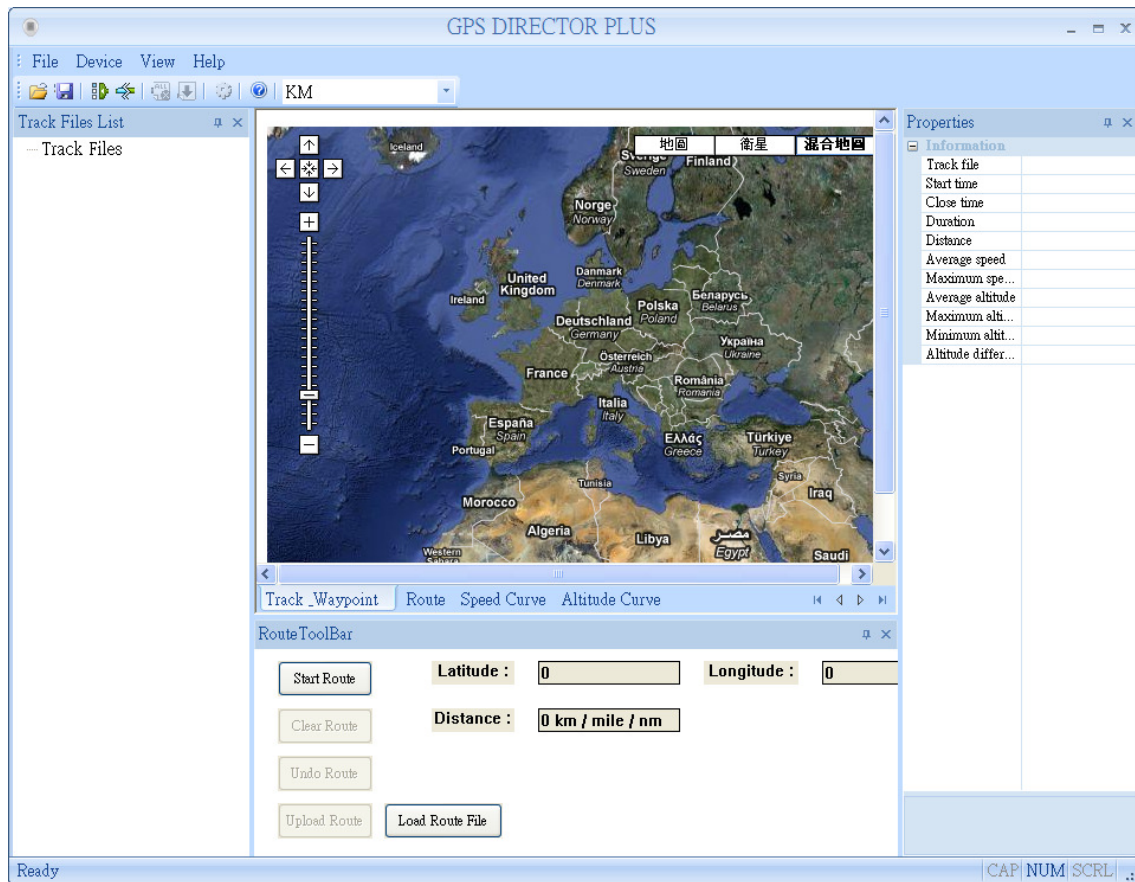



Unlock the cover switch




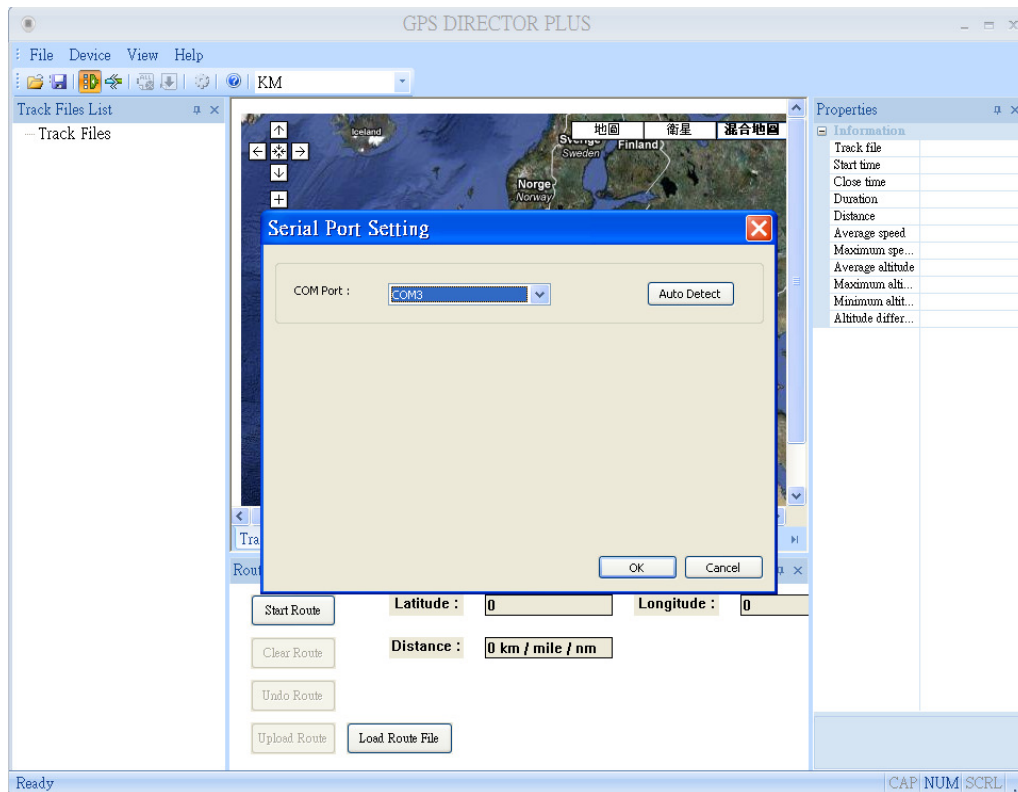
Insert the cable into connector

2. Power on the device by long click power button.
3. Click the “GPS DIRECTOR PLUS” path on desktop to start the PC Utility

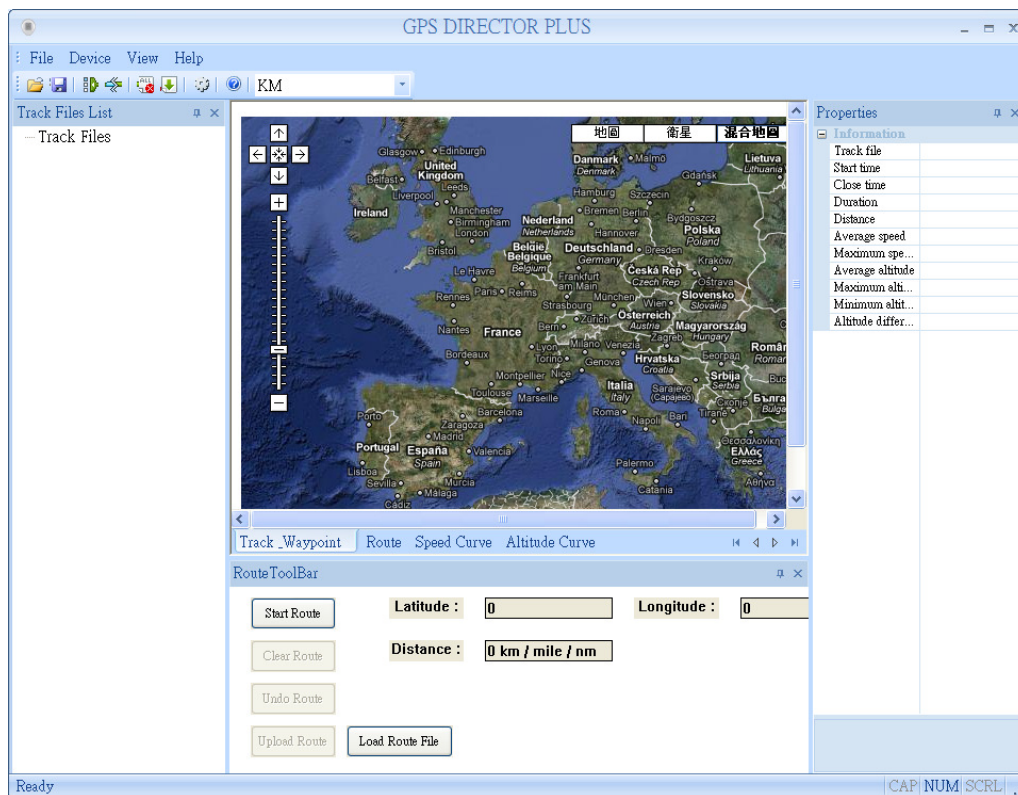


(Note:  functions will be enabled after linking.)

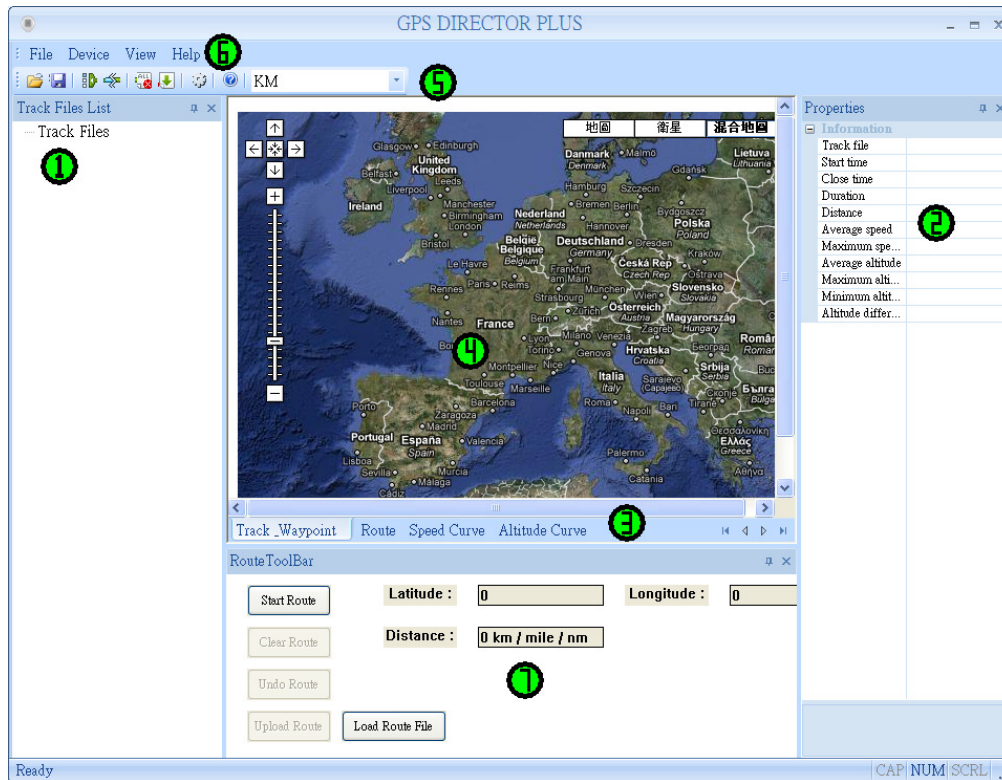
- Click “Link”  to set the comport or use “Auto Detect” to find the correct comport of device. Then click “OK” to execute the link.



- While the link successes,    functions will be enabled as color icon.



## 4-3-2 UI Explanation



① Route Folder List: Through downloading data from GD-102/ load existing files of GSD to load the route and display related information in this column

② Route Information Column: It shows the detailed information of the selected route from left part which including “File Name”, “Start time”, “End time”, “Route time”, “Moving distance”, “Average speed”, “Max. speed”, “Max height”, “Min. height” and “Height differential” information column.

③ Table Flag: There are four tables to display as below;

- Track Waypoints → Display the selected route on the map.
- Route → Map out the pass points of route on the map.
- Speed Curve → Display the speed/time homologous table of the selected route.
- Altitude Curve → Display the altitude/time homologous table of the selected route.

④ Route map/information display: Display the information from the homologous function.


⑤ Tool bar: Select the function to use. The group functions as “Open”, “Save”, “Link”, “Disconnect”, “Delete routes”, “Load route” and “Device setup”.

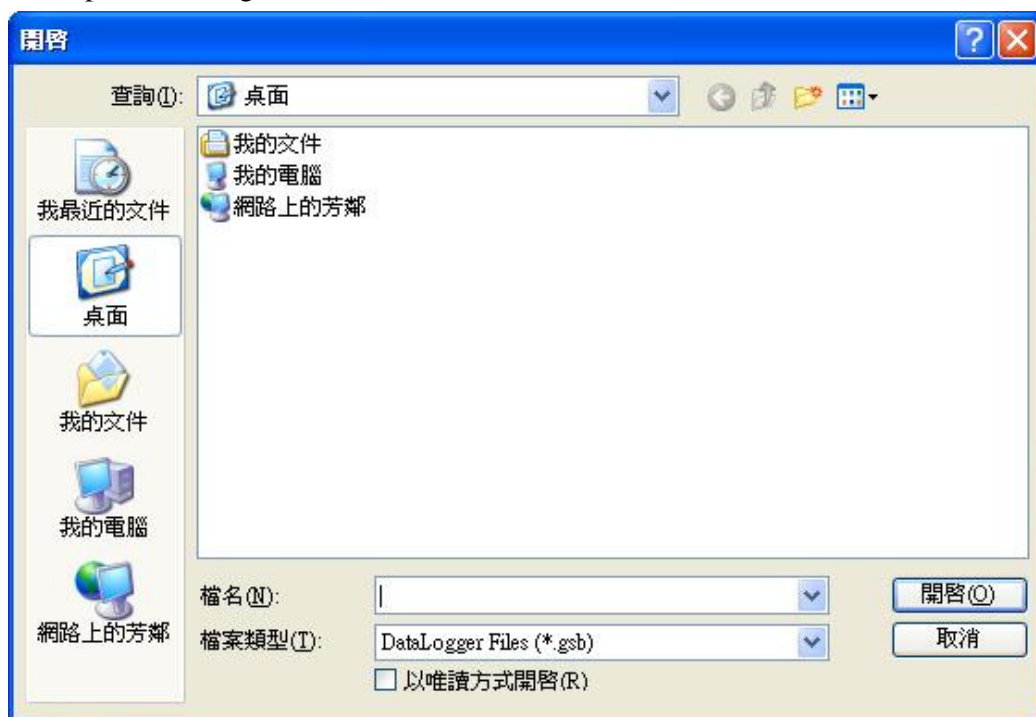
⑥ Function bar: It has “Files”, “Device”, “View” and “About” function buttons.


⑦ Route Tool Bar: To start the route information editing including “Start Route”, “End Route”, “Undo Route”, “Clear Route”, “Upload Route”, and “Load Route File”

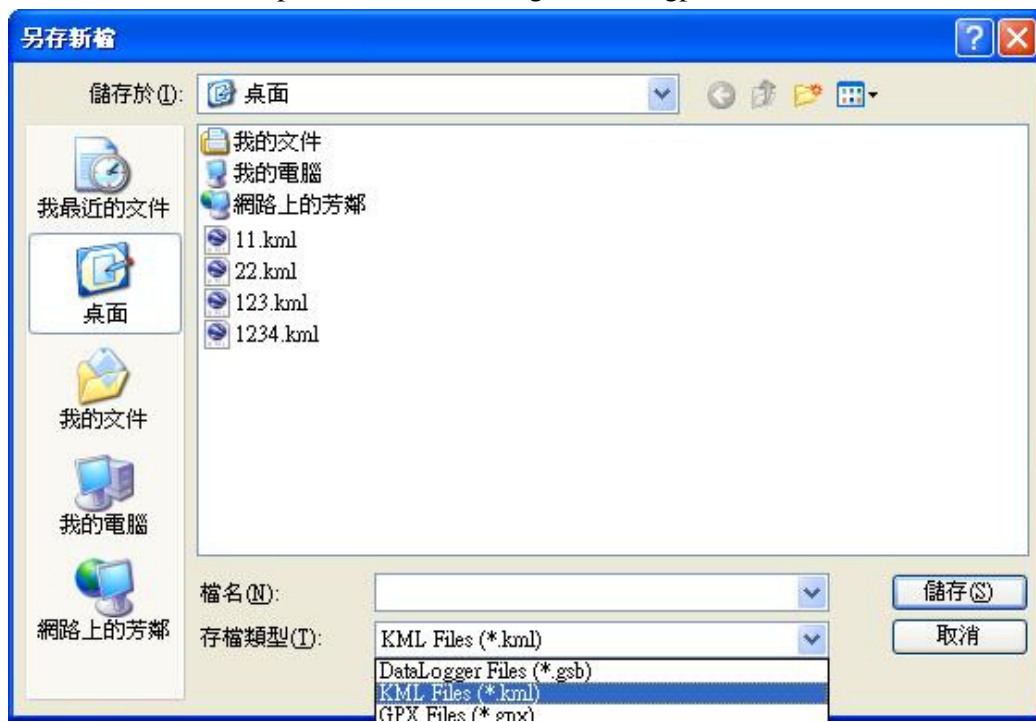
#### 4-3-3 Tool bar/Function bar Explanation

File→

Open  : Open file as \*.gsb format.






Save  : Save and export out the data as \*.gsb/\*.kml/\*.gpx formats.



Exit : Close PC Utility.

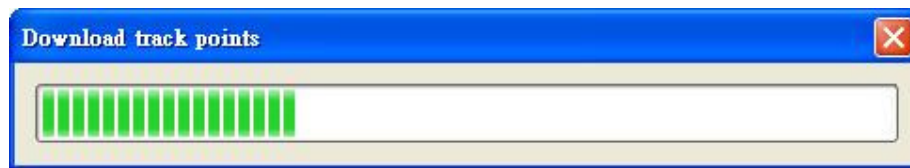
Device➡

**Disconnect**  : Disconnect GD-102. When disconnected,  icon will be disabled.

**Clean track points**  : While connected, press the button to clear the route of GD-102 device. The confirmation window is as below.



**Download track points**  : Download the data logger from GD-102.



Processing screen

**Clean GPS Information:** Clear the time and the distance of the accumulating information page in GD-102.



**POI Setting:** Manually enter the Latitude and Longitude of the five target points. Please enter in DD/MM/SS and N/S, E/W format. (DD: Degree, MM: Minutes, SS: Second, FF: Float of Second, N/S: North/South, E/W: East/West).

- **DD MM SS.FF** N / S

DD➡00~90 / MM➡00~60 / SS➡00~60 / FF➡00~99 (Max. is 90 00 00.00 N / S)

- **DDD MM SS.FF** E / W

DDD➡00~180 / MM➡00~60 / SS➡00~60 / FF➡00~99(Max. is 180 00 00.00 E/W)

**POI Setting**

POI 1 :	12 34 56.78N	123 45 53.21E
POI 2 :	00 00 00.00N	000 00 00.00E
POI 3 :	00 00 00.00N	000 00 00.00E
POI 4 :	00 00 00.00N	000 00 00.00E
POI 5 :	00 00 00.00N	000 00 00.00E

OK Cancel

**Device Setting** : GD-102 Device Setup for backlight/auto-off/Unit/Logger interval in System/Log page.

**Device Setting**

System Log

Backlight Time: Always On

Suspend Time: Off

☒ km
 ☐ mile
 ☐ nm

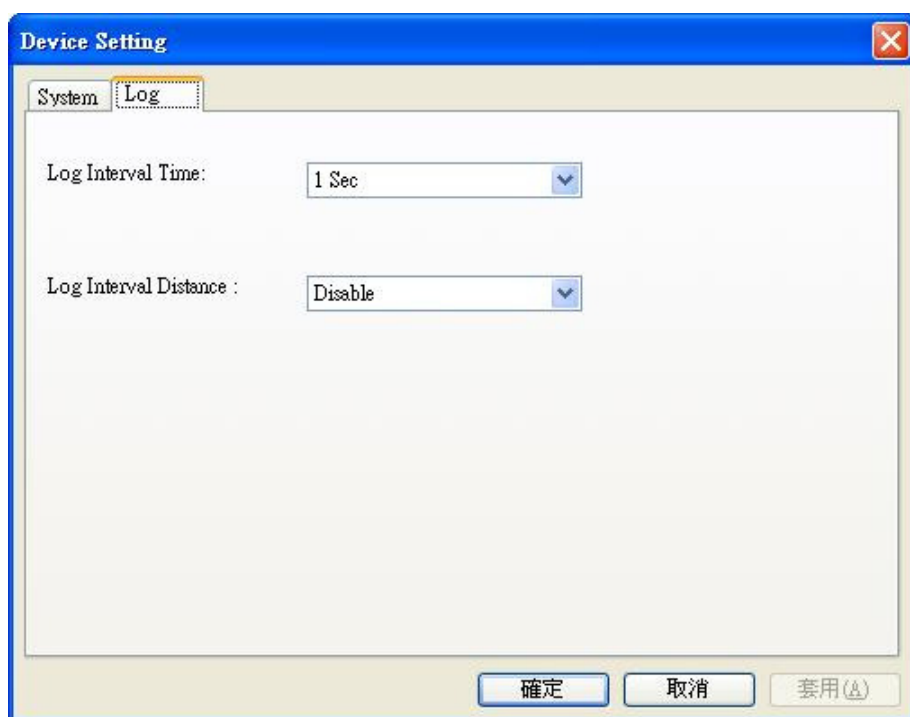
確定 取消 套用(A)

◆ System page


Backlight Time: Always on/5/10/20/30/Off (Unit: second)

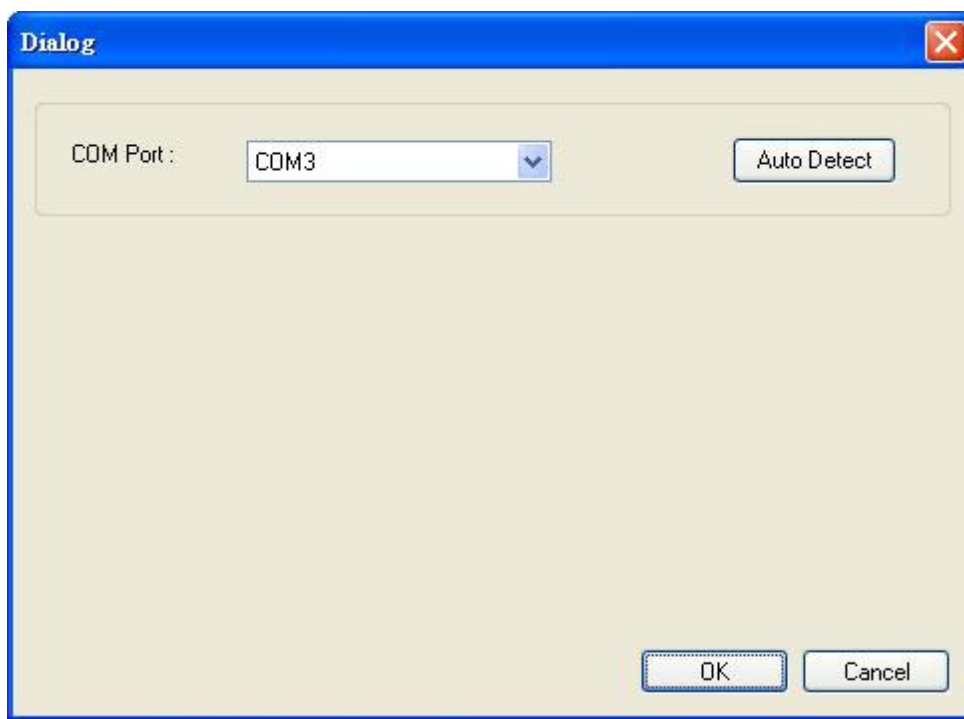
Suspend Time: 1/3/5/10/30/60/Always on (Unit: minute)

Distance Unit: km/mile/nm



- ◆ Log page:
  - Log Interval Time: 1/3/5/10/30/60 (Unit: second)
  - Log Interval Distance: Disable/10/20/30/40/50 (Unit: meter)

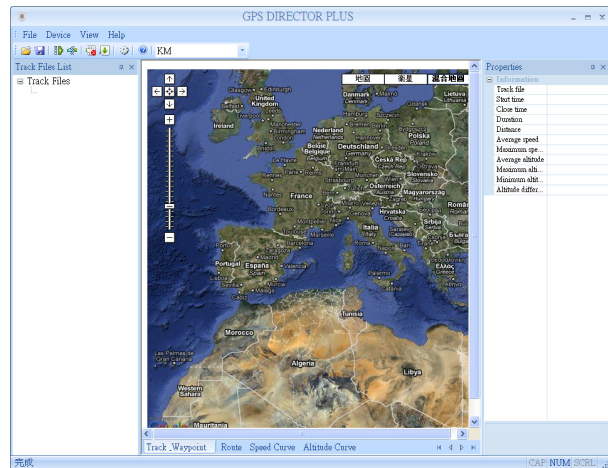
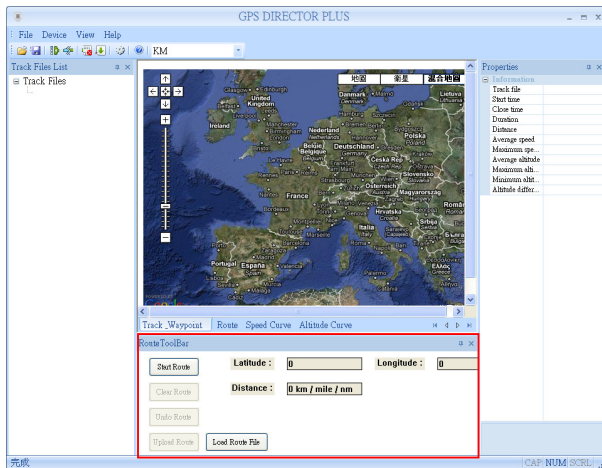
**Serial Port Setting**  : Select the comport or click “Auto Detect” button to get the comport. Then click “OK” to link GD-102.



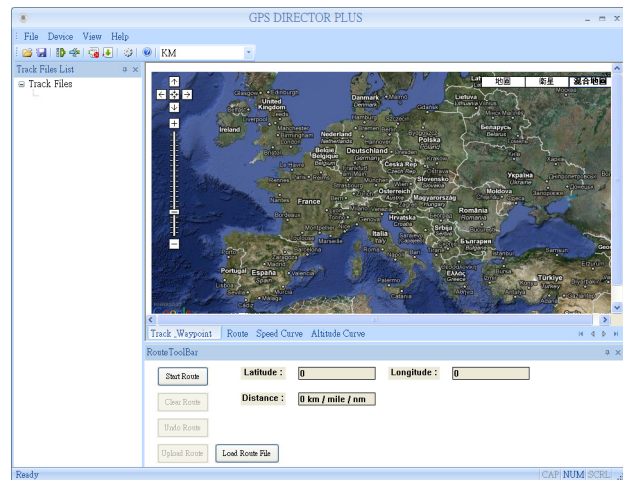
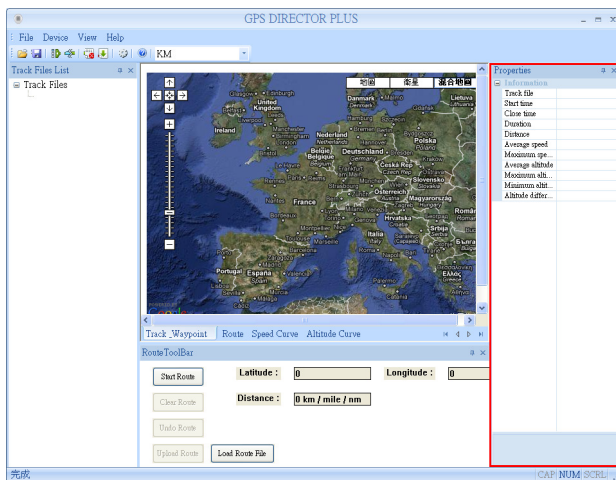
View➔

Toolbars and Docking Windows➔

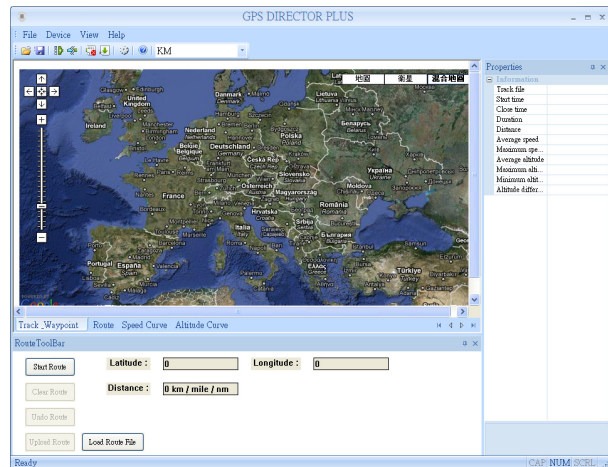
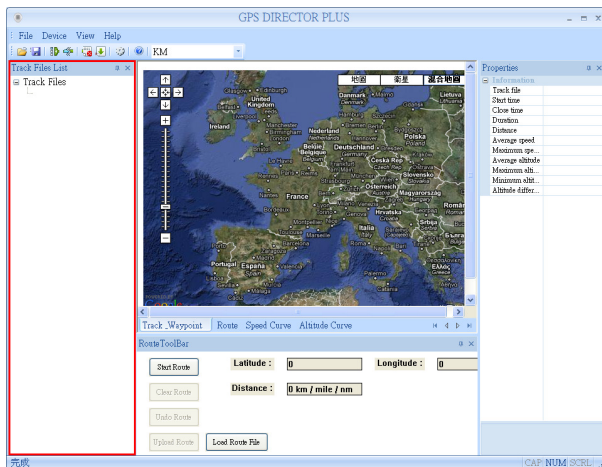
- ◆ **Standard:** Enable/Disable Tool bar
- ◆ **Route Tool Bar:** Enable/Disable Route function



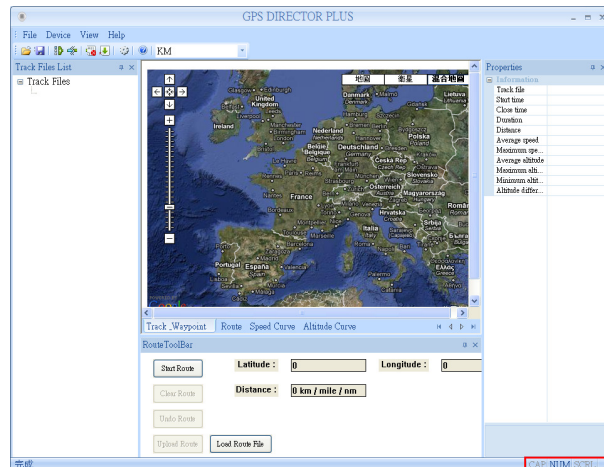
- ◆ **Properties:** Enable/Disable Route Information Column



- ◆ **Track File List:** Enable/Disable Route Folder List




Status Bar : Enable/Disable Status List




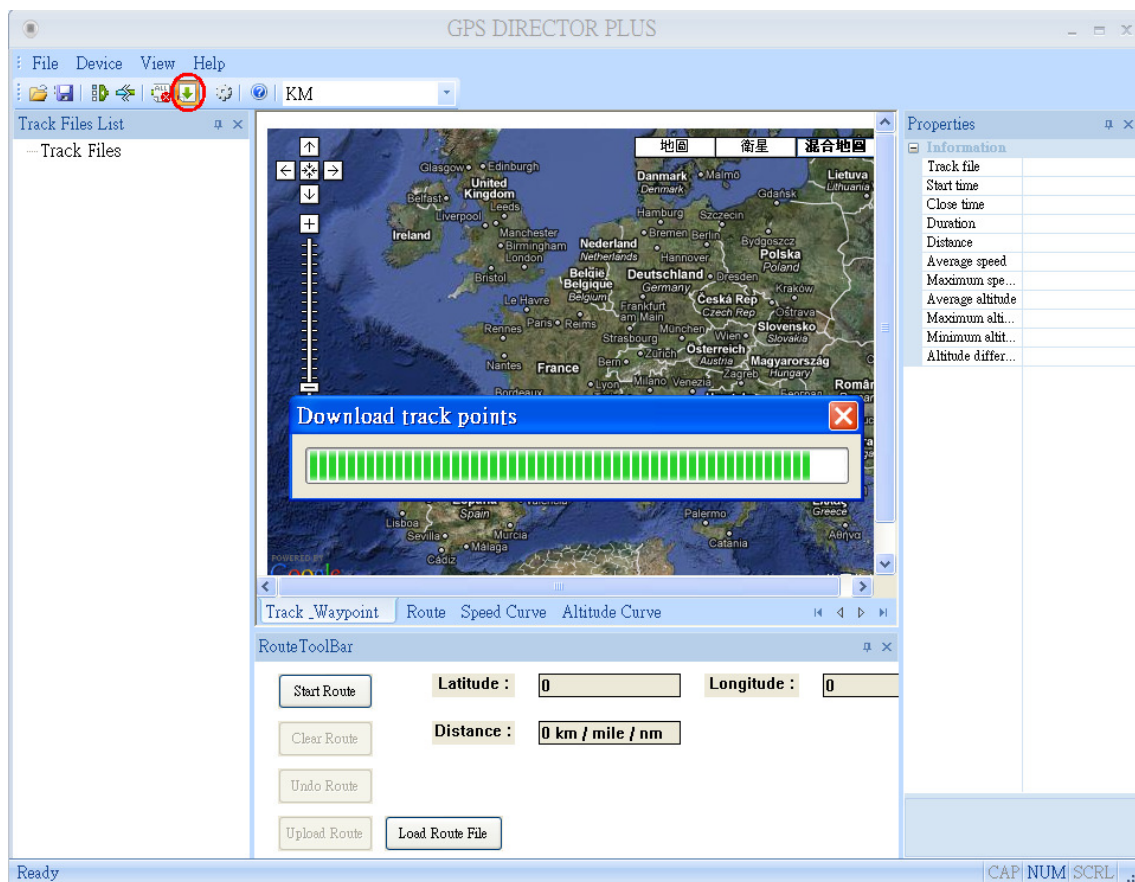
Application Appearance → Select screen style by user's preference.

Help →

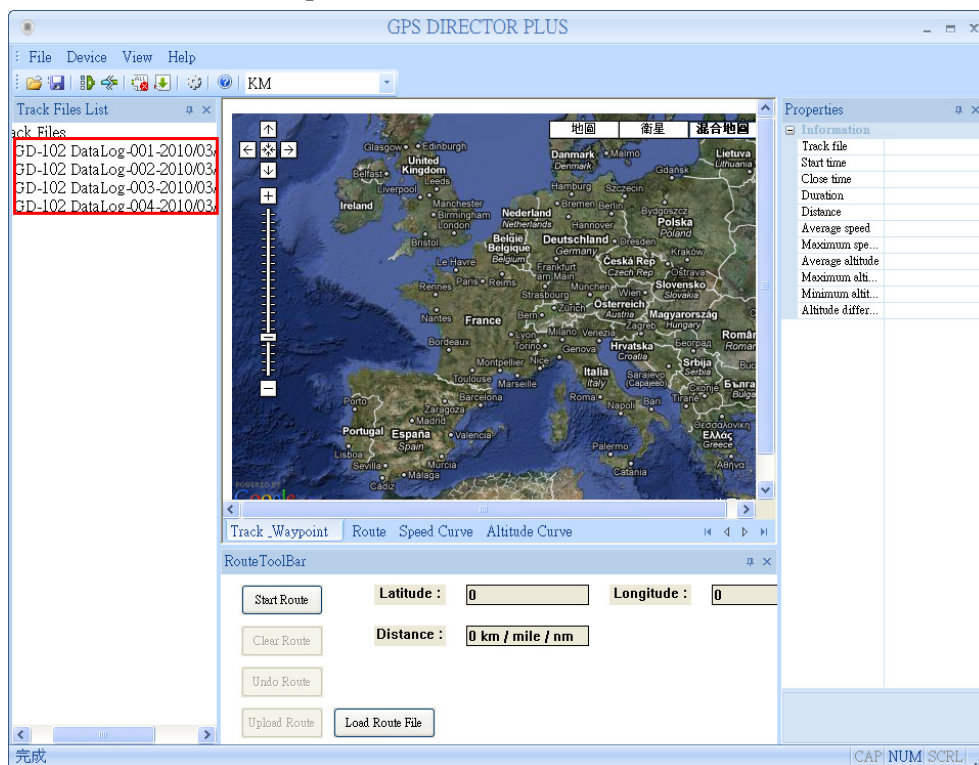
About GPS Director Plus  : Display the software version and release date

#### 4-3-4 Download data/ Saving Data/ Open data on computer

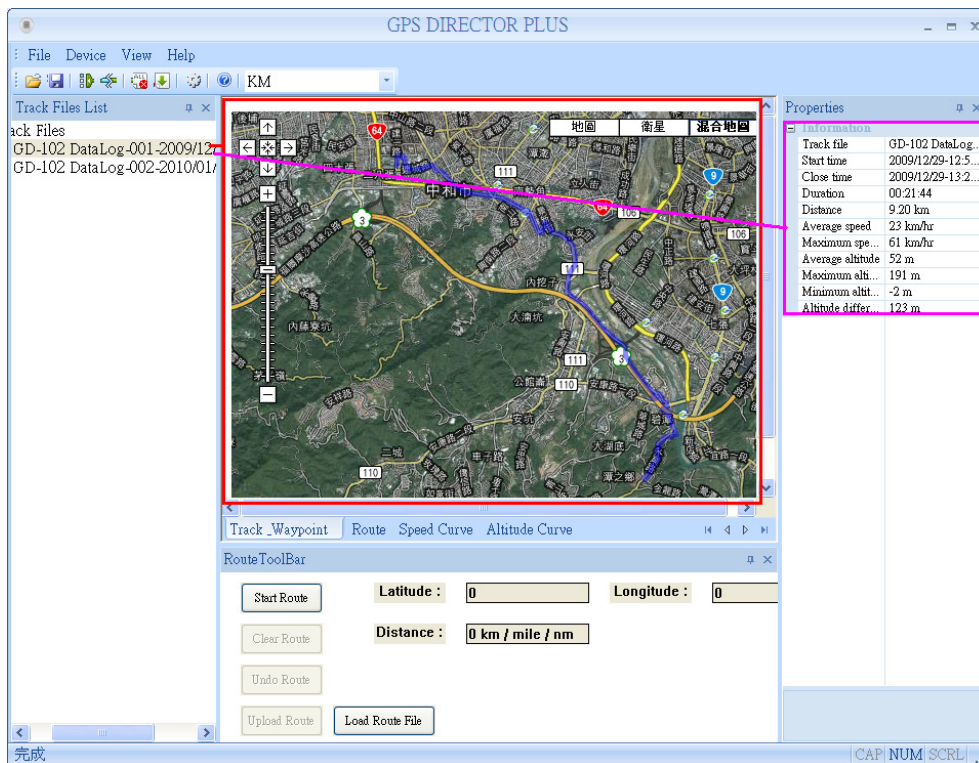
1. Please follow the steps to link GD-102 and PC and then click  to download GD-102 log data. The processing screen is as below;



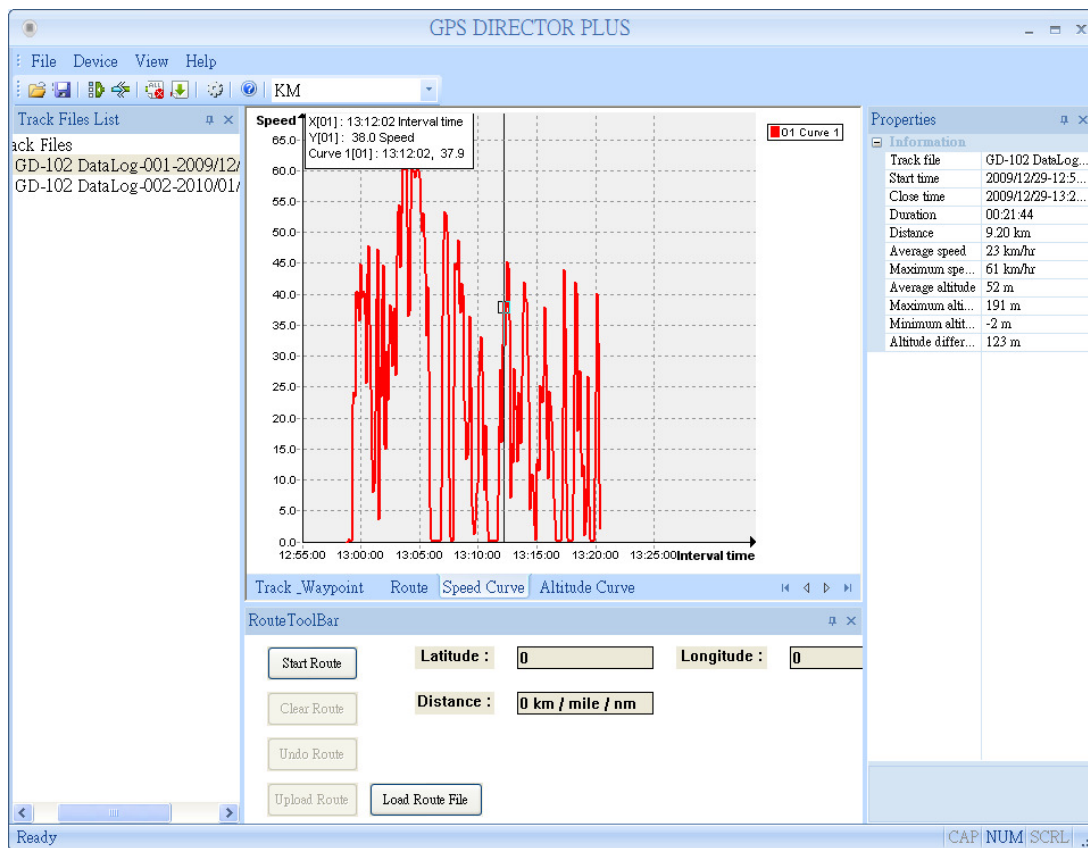
After the download completes, it will show the route list in left column.



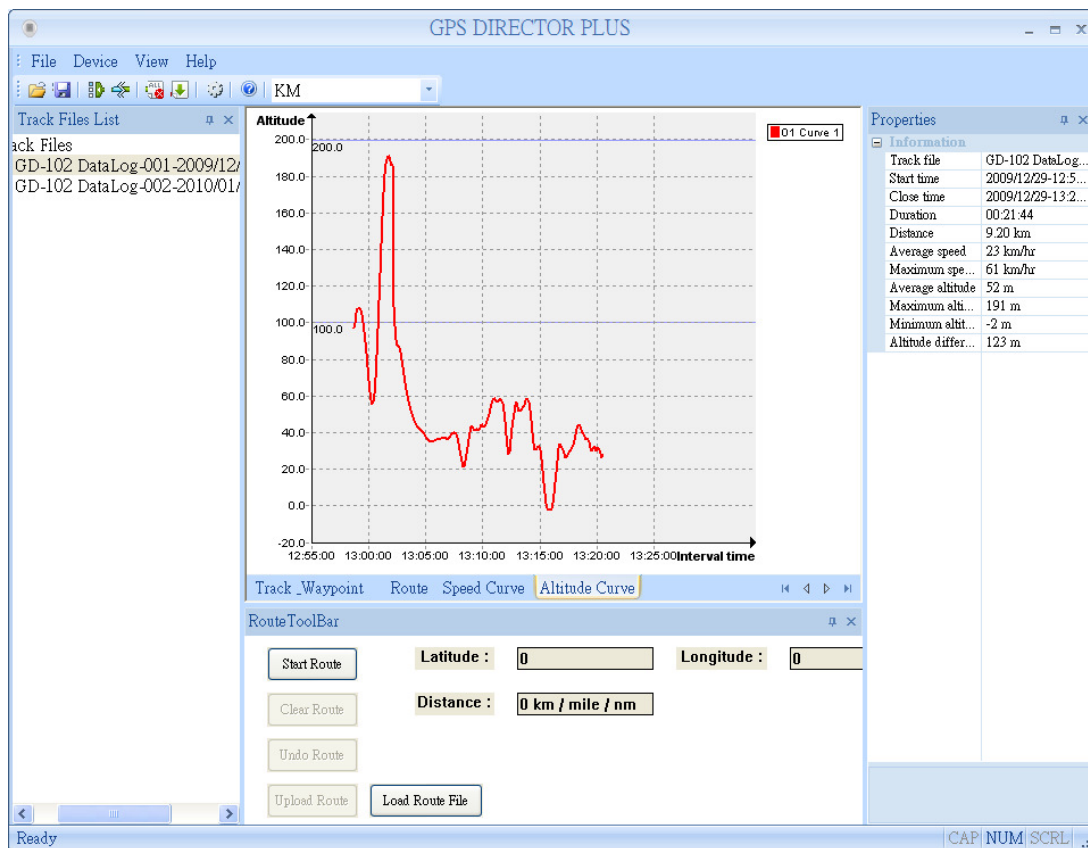
2. Click the preferred route in left and the detailed route information will be shown on right part as below. User can also switch the table flag to review the route mapping, speed table, and altitude table.




Route mapping of selected route

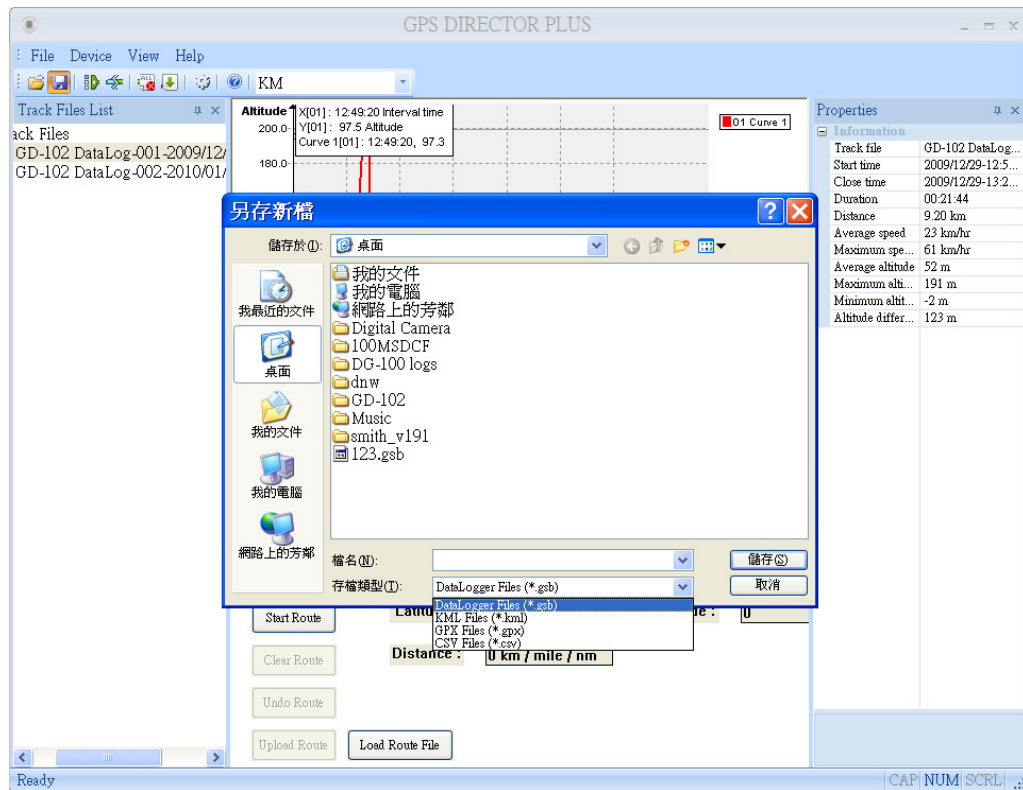


Speed table of selected route

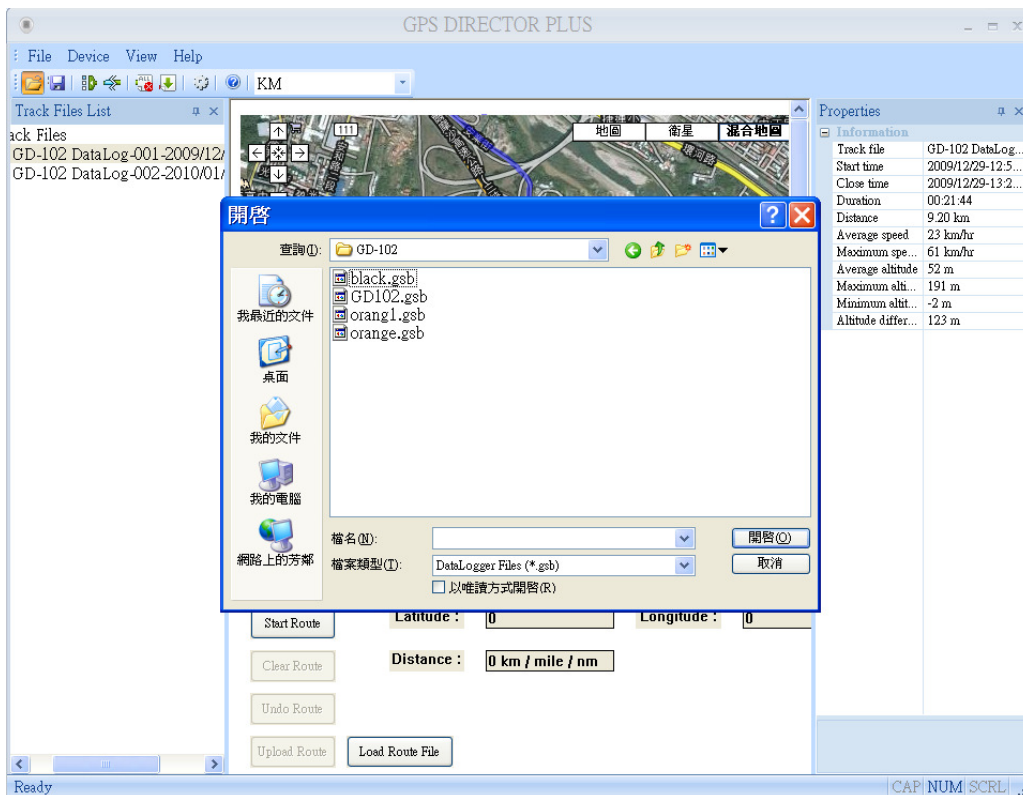


Altitude table of selected route

- Click the save icon  to save/export the data as gsb/kml/gpx formats from GD-102 download.

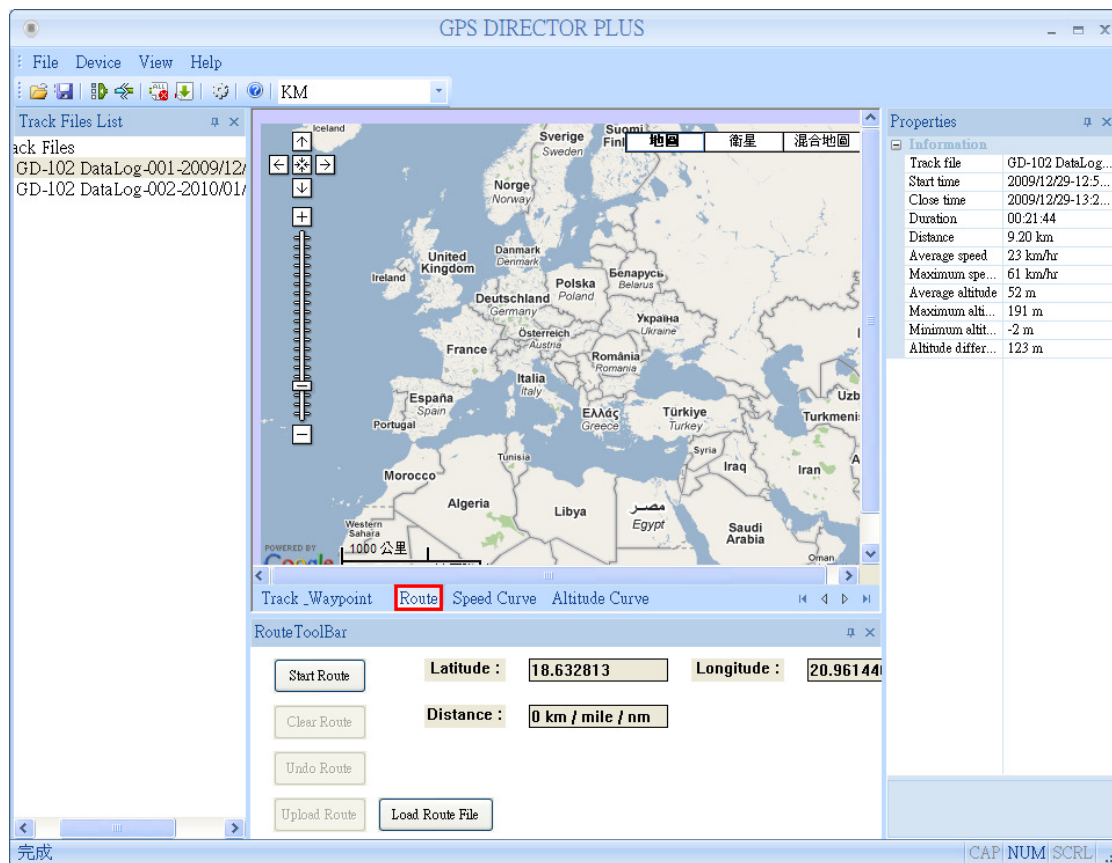


- Click the folder icon  to open the exist file.



### 4-3-5 Set GD-102 Multi-points route navigating function

1. Click the flag of Route as the screen. It will switch to the setting screen.



Parameter Explanation:

Route Tool Bar:

**Start Route** Start the route / **SaveRoute** Save the route /

**Load Route File** Load existed files / **Upload Route** Upload route files into device /

**Clear Route** Clear current route / **Undo Route** Undo the last point

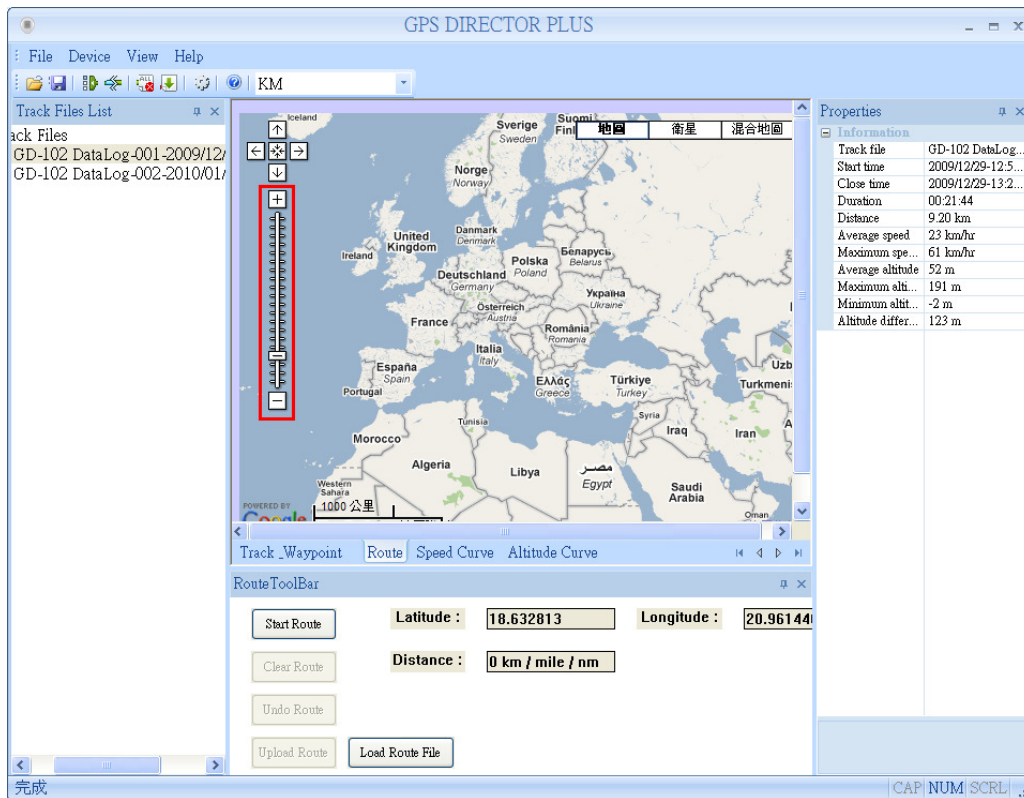
**Latitude :** **121.496859** **Longitude :** **24.991776**

Lat/ Long of cursor location

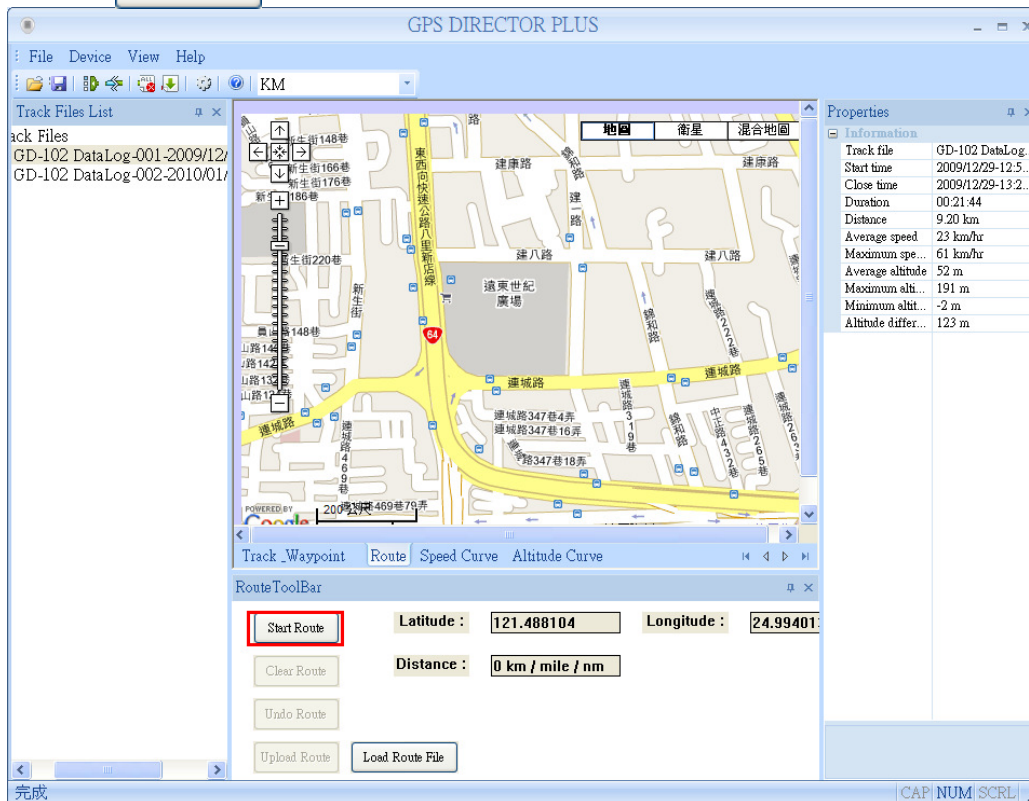
**Distance :** **0.323289 km**

The total distance of the current route

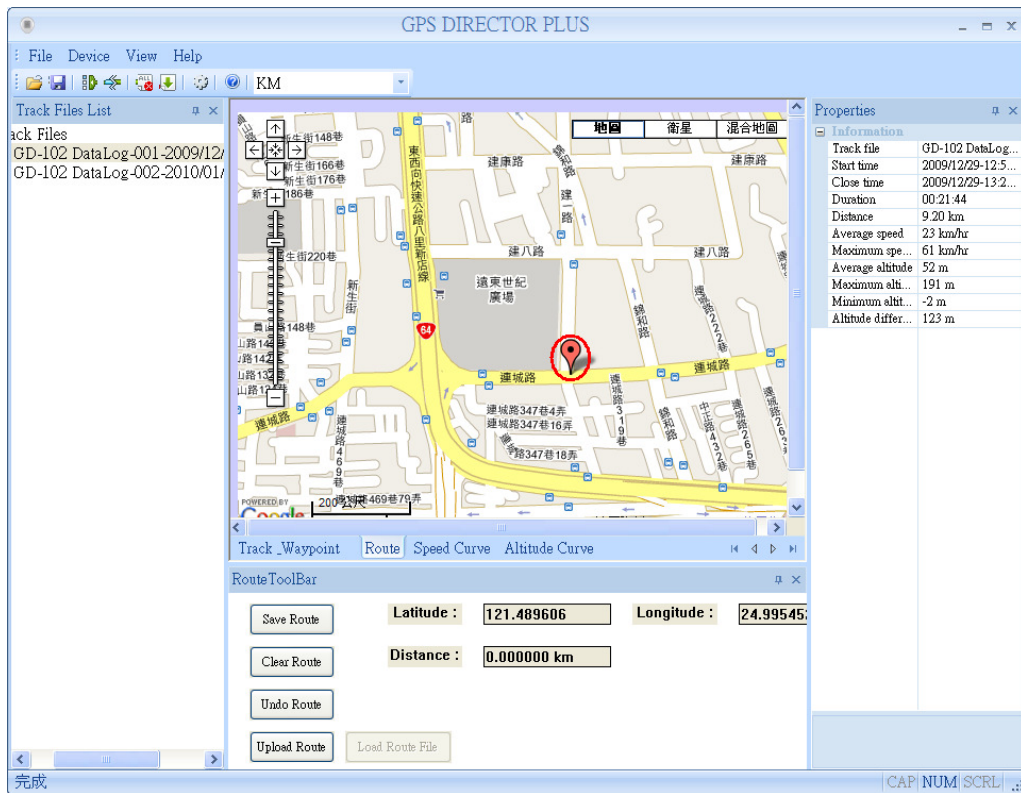
2. Pull the map to your favorite region and use the zoom bar to zoom to the suitable scale for making the route.



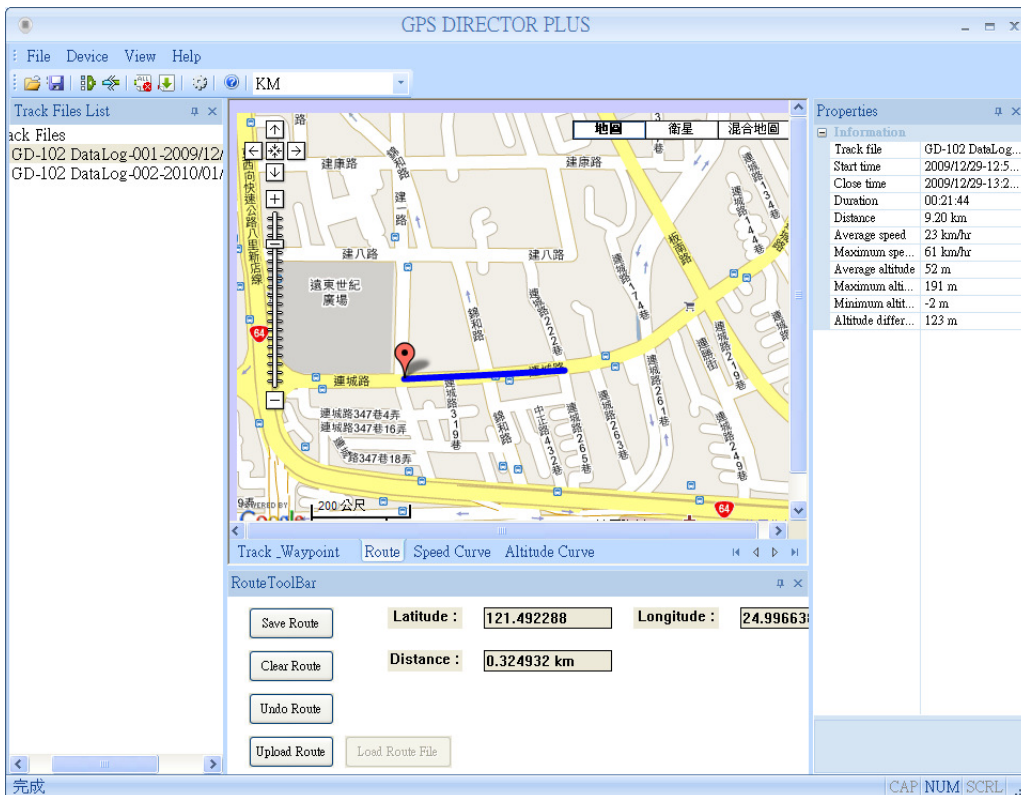
3. Click **Start Route** to start the route plan.



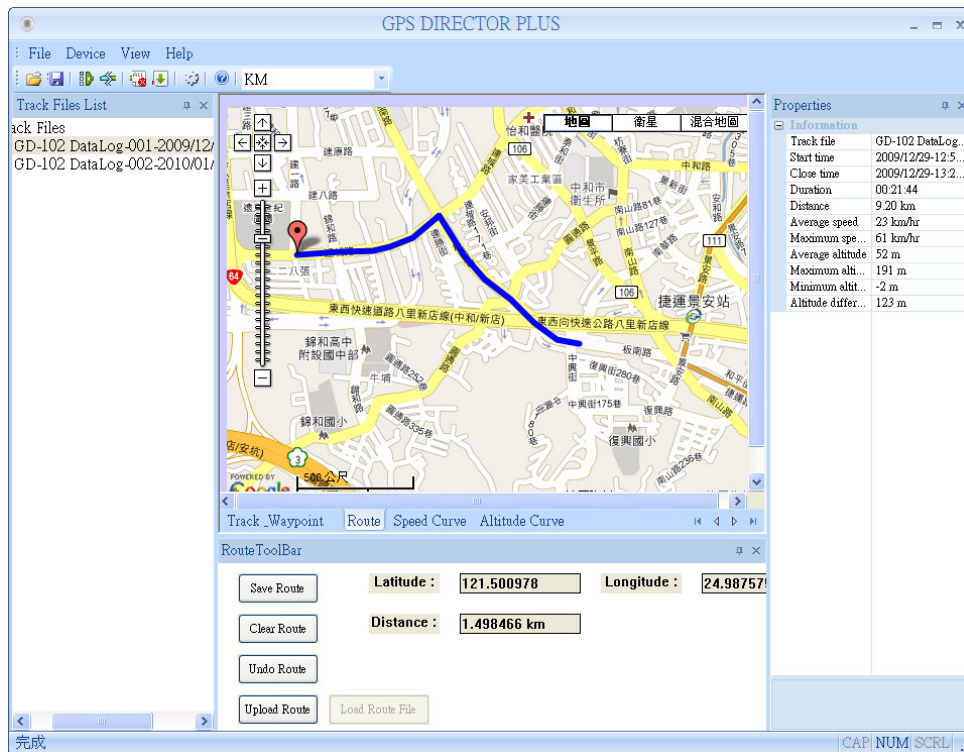
- Move the cursor on the map and click the left button of mouse to mark the starting point.



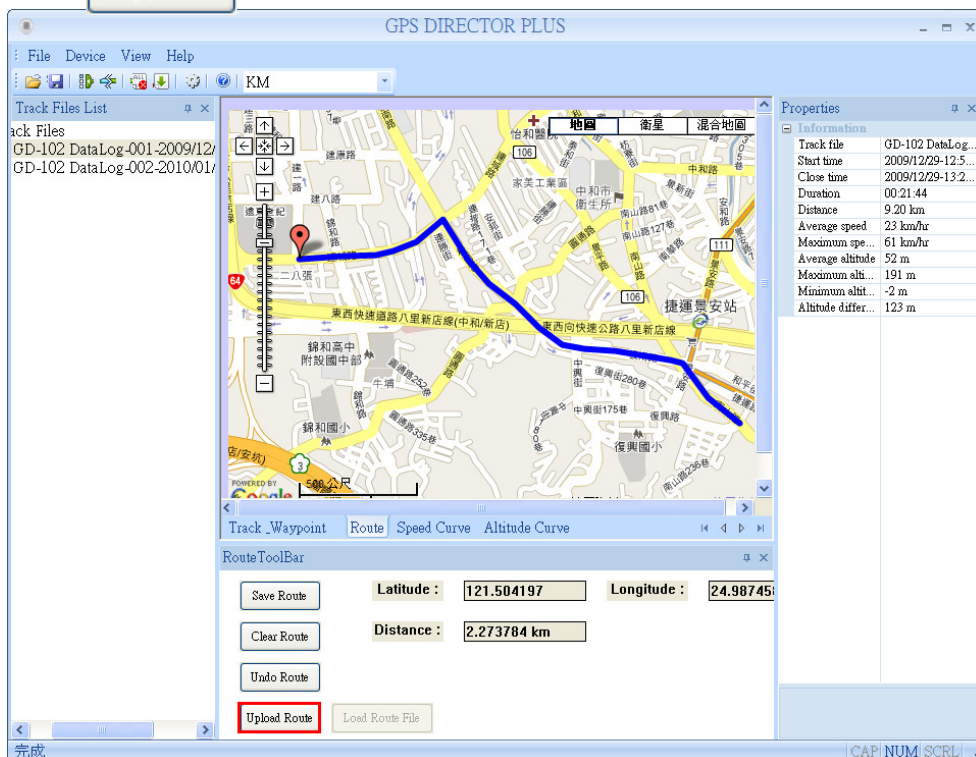
- Pull the map by left key and click the right button for the next point of the route.



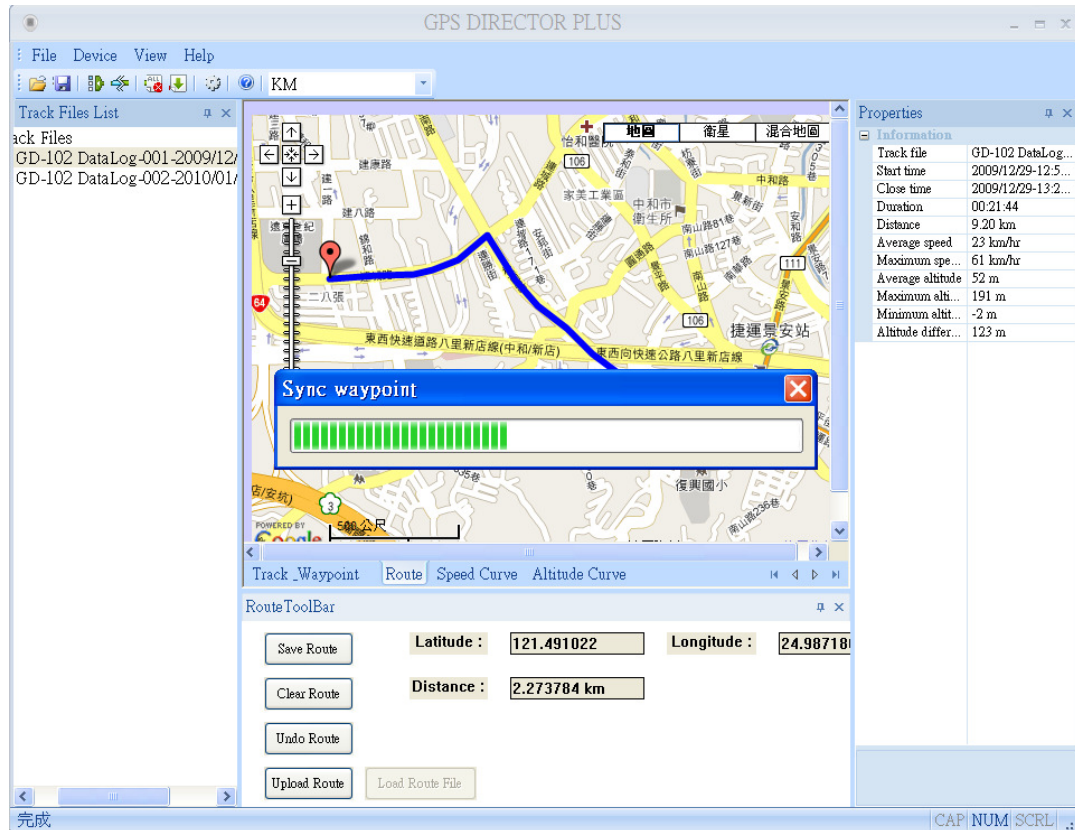
6. Repeat the “5” step to complete all points. The max number of points is 250 for a route. It will show the total distance of the route on the left window.



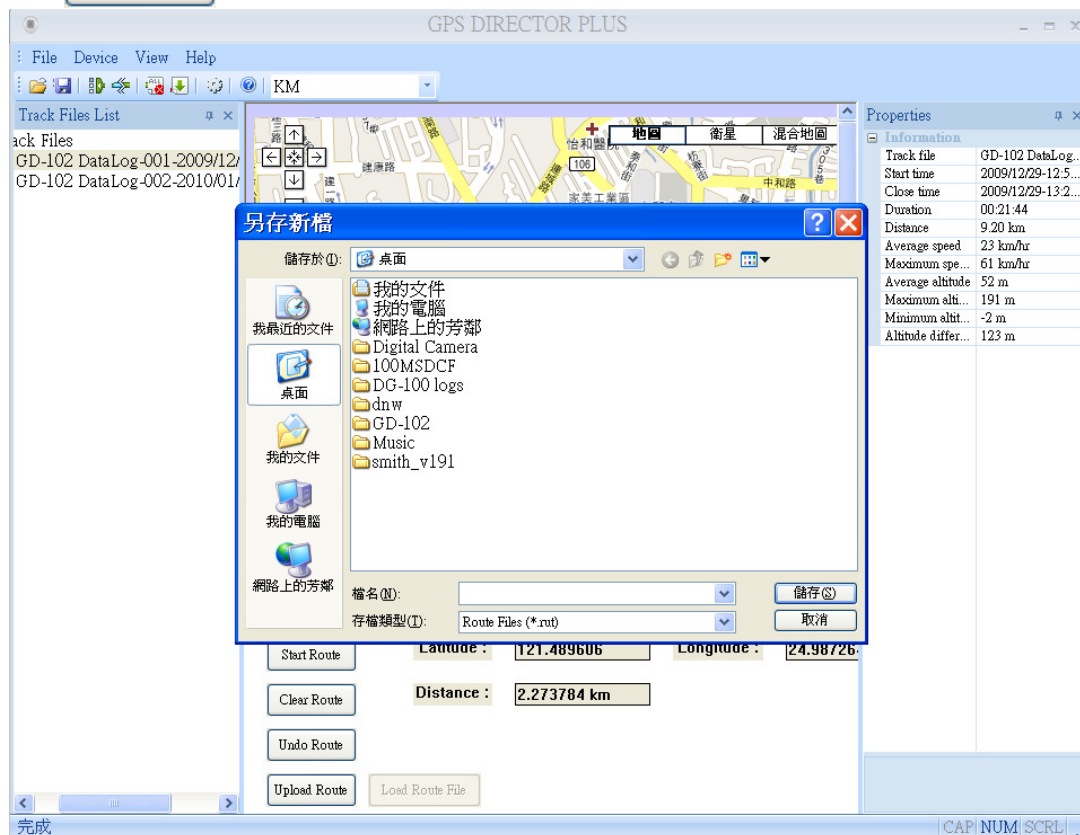
7. Connect GD-102 with PC and power on the device. (Note: Please confirm the connection correctly)
8. Click **SaveRoute** to finish the route plan and upload to GD-102.



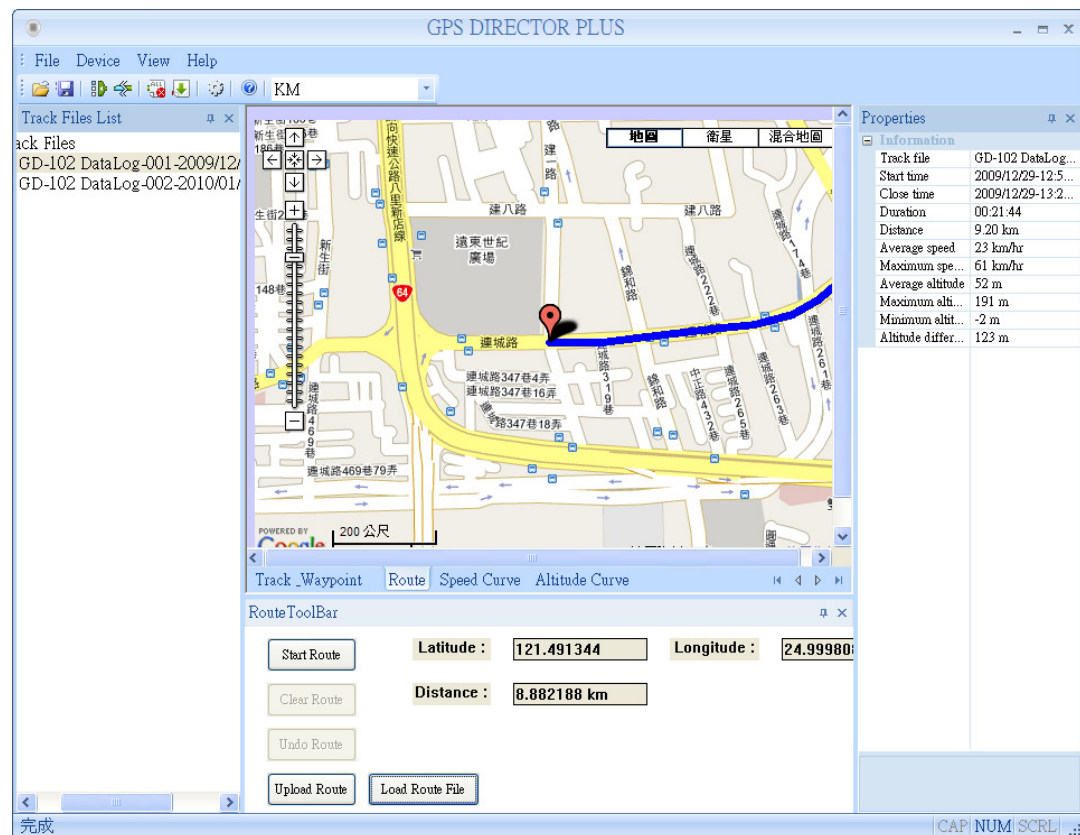
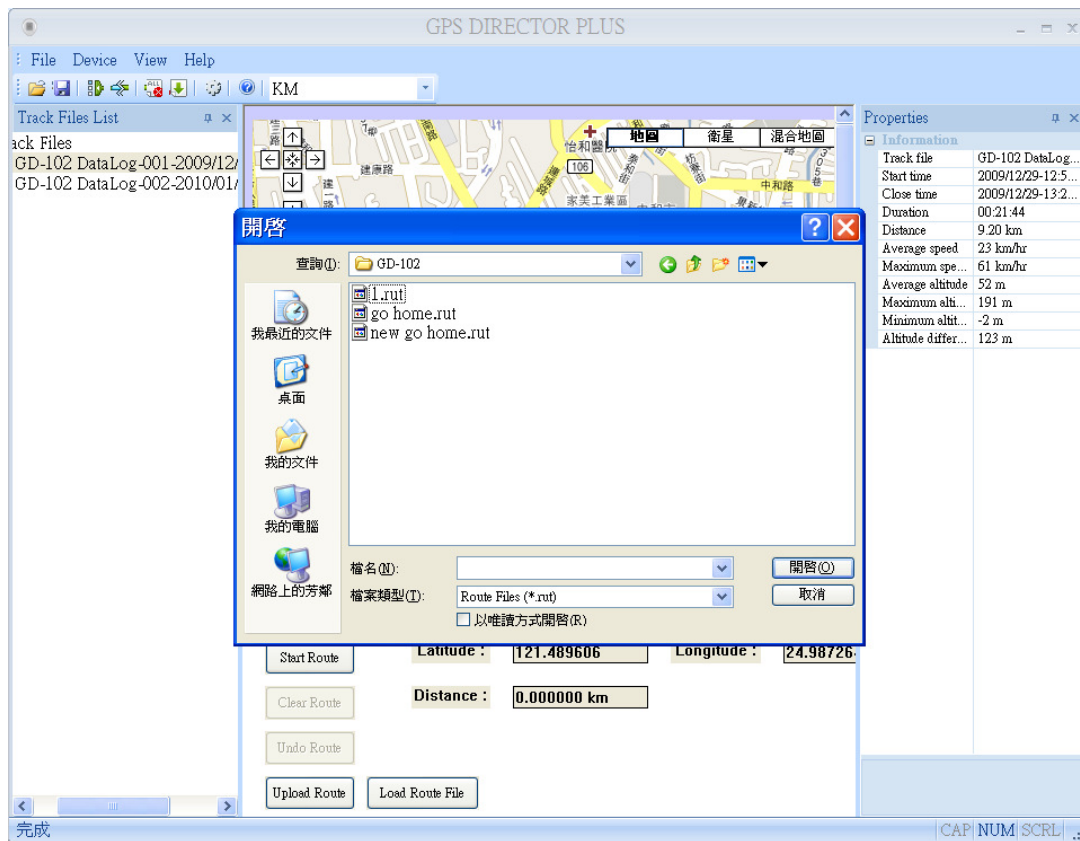
9. Complete the upload after 100% processing.



10. Click **SaveRoute** to save the route file and then enter the file name.



11. Click **Load Route File** to read the existed route file. Click the route file and click “Open” to load the route



## Chapter 5: Troubleshooting

When GD-102 can not be turned on or does not work properly,

Please check if the battery is installed correctly.

<b>1.</b>	It requires more time to get GPS fix while GD-102 is moving. Please keep GD-102 stationary when powering on GD-102. This will shorten the time to get a GPS fix.
<b>2.</b>	Keep GD-102 away from excessive moisture and extreme temperatures. Do not leave it in the closed vehicles or put it under direct sunlight for extended periods of time. Excessive moisture and extreme temperatures may damage the GD-102.
<b>3.</b>	If the date and time is not correct, please select the local time zone in the time zone setting. Ex: PST GMT -8 / Taiwan GMT +8
<b>4.</b>	Do not put GD-102 near the magnetic objects like electric appliances or magnets. The magnetic objects may cause the GD-102 point to wrong direction.
<b>5.</b>	If the pointed direction is not accurate, please adjust the electronic compass.
<b>6.</b>	If PC Utility can not load route and setting from GD-102 device, please check the items as below; 1. Driver Installation, 2. Device need to power on, 3. USB Cable connected correctly between PC and device.

# Appendix 1 : World Time Zone Table

<b>Time Code</b>	<b>Description</b>	<b>Region</b>	<b>Time Zone</b>
<i>ACDT</i>	Australian Central Daylight Time	Australia	+10:30
<i>ACST</i>	Australian Central Standard Time	Australia	+ 9:30
<i>ADT</i>	Atlantic Daylight Time	North America	- 3:00
<i>AEDT</i>	Australian Eastern Daylight Time	Australia	+ 11:00
<i>AEST</i>	Australian Eastern Standard Time	Australia	+ 10:00
<i>AKDT</i>	Alaska Daylight Time	North America	- 8:00
<i>AKST</i>	Alaska Standard Time	North America	- 9:00
<i>AST</i>	Atlantic Standard Time	North America	- 4:00
<i>AWDT</i>	Australian Western Daylight Time	Australia	+ 9:00
<i>AWST</i>	Australian Western Standard Time	Australia	+ 8:00
<i>BST</i>	British Summer Time	Europe	+ 1:00
<i>CDT</i>	Central Daylight Time	Australia	+10:30
<i>CDT</i>	Central Daylight Time	North America	- 5:00
<i>CEDT</i>	Central European Daylight Time	Europe	+ 2:00
<i>CEST</i>	Central European Summer Time	Europe	+ 2:00
<i>CET</i>	Central European Time	Europe	+ 1:00
<i>CST</i>	Central Summer Time	Australia	+ 10:30
<i>CST</i>	Central Standard Time	Australia	+ 9:30
<i>CST</i>	Central Standard Time	North America	- 6:00
<i>CXT</i>	Christmas Island Time	Australia	+ 7:00
<i>EDT</i>	Eastern Daylight Time	Australia	+ 11:00
<i>EDT</i>	Eastern Daylight Time	North America	- 4:00
<i>EEDT</i>	Eastern European Daylight Time	Europe	+ 3:00
<i>EEST</i>	Eastern European Summer Time	Europe	+ 3:00
<i>EET</i>	Eastern European Time	Europe	+ 2:00
<i>EST</i>	Eastern Summer Time	Australia	+ 11:00
<i>EST</i>	Eastern Standard Time	Australia	+ 10:00
<i>EST</i>	Eastern Standard Time	North America	- 5:00
<i>GMT</i>	Greenwich Mean Time	Europe	0:00
<i>HAA</i>	Heure Avancée de l'Atlantique	North America	- 3:00
<i>HAC</i>	Heure Avancée du Centre	North America	- 5:00
<i>HADT</i>	Hawaii-Aleutian Daylight Time	North America	- 9:00
<i>HAE</i>	Heure Avancée de l'Est	North America	- 4:00
<i>HAP</i>	Heure Avancée du Pacifique	North America	- 7:00

<i>HAR</i>	Heure Avancée des Rocheuses	North America	- 6:00
<i>HAST</i>	Hawaii-Aleutian Standard Time	North America	- 10:00
<i>HAT</i>	Heure Avancée de Terre-Neuve	North America	-2:30
<i>HAY</i>	Heure Avancée du Yukon	North America	- 8:00
<i>HNA</i>	Heure Normale de l'Atlantique	North America	- 4:00
<i>HNC</i>	Heure Normale du Centre	North America	- 6:00
<i>HNE</i>	Heure Normale de l'Est	North America	- 5:00
<i>HNP</i>	Heure Normale du Pacifique	North America	- 8:00
<i>HNR</i>	Heure Normale des Rocheuses	North America	- 7:00
<i>HNT</i>	Heure Normale de Terre-Neuve	North America	- 3:30
<i>HNY</i>	Heure Normale du Yukon	North America	- 9:00
<i>IST</i>	Irish Summer Time	Europe	+ 1:00
<i>MDT</i>	Mountain Daylight Time	North America	- 6:00
<i>MESZ</i>	Mitteleuroäische Sommerzeit	Europe	+ 2:00
<i>MEZ</i>	Mitteleuropäische Zeit	Europe	+ 1:00
<i>MSD</i>	Moscow Daylight Time	Europe	+ 4:00
<i>MSK</i>	Moscow Standard Time	Europe	+ 3:00
<i>MST</i>	Mountain Standard Time	North America	- 7:00
<i>NDT</i>	Newfoundland Daylight Time	North America	- 2:30
<i>NFT</i>	Norfolk (Island) Time	Australia	+ 11:30
<i>NST</i>	Newfoundland Standard Time	North America	- 3:30
<i>PDT</i>	Pacific Daylight Time	North America	- 7:00
<i>PST</i>	Pacific Standard Time	North America	- 8:00
<i>UTC</i>	Coordinated Universal Time	Europe	0:00
<i>WDT</i>	Western Daylight Time	Australia	+ 9:00
<i>WEDT</i>	Western European Daylight Time	Europe	+ 1:00
<i>WEST</i>	Western European Summer Time	Europe	+ 1:00
<i>WET</i>	Western European Time	Europe	0:00
<i>WST</i>	Western Summer Time	Australia	+ 9:00
<i>WST</i>	Western Standard Time	Australia	+ 8:00

## Appendix 2 : FCC Notices

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC RF Exposure requirements:

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.